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ORIGINAL ARTICLES

SOME POINTS OF RELATIONSHIP BETWEEN ORTHODONTIA AND OTORHINOLOGY*

BY W. G. KENNON, M.D., NASHVILLE, TENN.

ALL branches of medicine and surgery are so intimately related that to single out and emphasize the relationship of any two special branches is a difficult procedure. Especially is it difficult in the case of orthodontia and rhinology where the relations are so intimate and obvious that one specialty is almost essential to the other.

Ballenger said, "Show me a man with bowed legs, and I will show you a man who had adenoids in infancy." Frederick Coolidge called attention to the apparent relationship between adenoids and the various forms of club foot. These relationships as to cause and effect appear to me, however, a little far-fetched. I am sure that all of us realize the importance to the welfare of our patients that we recognize the necessity of cooperation in taking care of many of those who come to us for correction of certain pathologic conditions. Certain it is, that if we do recognize this necessity the percentage of our failures will, in certain sorts of cases, be greatly lessened.

Proper nasal breathing is so important both from the standpoint of good general health, and a more or less pleasing personal appearance, that no pains or effort should be spared in establishing it. Therefore, when the rhinologist fails to secure proper nasal breathing in a child after removing any obstructions (usually adenoids) to nasal respiration he should see to it that this patient have proper methods instituted looking to the correction of any deformity of the palate causing narrowing of its arch and due to this narrowing or rather failure of lateral expansion, the necessary space in the nasal chambers is not provided.

*Read before the Fourth Annual Meeting of the Southern Society of Orthodontists, Nashville, Tenn., January 21, 22, 1924.

I feel that we are, none of us, sufficiently careful in seeing that this sort of postoperative care is given. We are too much inclined to take out the child's adenoids and then trust to luck and the compensatory forces of natural growth and development for ultimate cure. Nor must the orthodontist forget in his enthusiasm that back of the narrow gothic arch and protruding and twisted incisor teeth, is probably something else beside the patent fact of the existing deformity. It must always be remembered that the natural tendency in growth and development is not toward the abnormal and unusual, but toward a certain standard type. Therefore when we meet these deviations from the normal we must ask ourselves, what is the underlying pathologic condition which is the fundamental cause of such deviations?

Has this patient some nasal obstruction which can be remedied? If so, it should be relieved not only for the patient's welfare, but for your own. It will certainly aid in correcting the deformities about which you are consulted, if you have the natural forces of development arrayed at your side. This is particularly important in younger patients before second dentition, where the development of the face is not as yet completed.

To return to the field of the rhinologist. If nasal respiration is not established or only partially secured, and no further efforts are made to check or remedy the maldevelopment or the lack of development, of the hard palate or alveolar arch, as the case may be, what can we expect as a result? First, of course, there is the lack of proper development of the external nose particularly the failure of the growth of the nasal alae, giving the nostrils narrow orifices, and a rather pinched expression. Further, by this same narrow arch the space for the teeth is narrowed, and there is, due to this crowding, a delayed eruption of the maxillary incisor teeth. They in turn, react on the premaxilla which, forming as it does a portion of the nasal septum, is crowded in its growth and bends, causing a deviation of this structure.

The use of orthodontic methods, early in life, would in my opinion, aid materially in preventing the occurrence of deviated septa from this cause, and be of distinct prophylactic benefit against the necessity of operations for deviations of the septum. The other portions of the septum are likewise affected by failure of lateral expansion of the palate, causing deviations of the septum from lack of supero-inferior space for the natural growth of this structure. In its growth, if proper space is not provided, it is obliged to bend. Had this palatal arch been properly spread in early life this deformity of the septum would not have occurred. The secondary effects of septal deviations and narrowing and crowding of the nasal chambers in promoting and prolonging sinus infections are so obvious as to require only passing comment.

All too frequently is the otologist consulted by some patient with ear pain, and after a thorough examination of the ear and its appendages nothing is found to explain the symptom. If investigation is carried still further we may find that we have teeth which are only partially erupted, or indeed have never even gotten a start in the right direction, due to the fact that

there was no room for them where they naturally should have appeared. Proper orthodontia would have provided this space and the removal of these crowded teeth would not have been necessary.

I hope, in presenting this short paper, I have not bored you too greatly by emphasizing facts which are too obvious, and that in some, including myself, I have stimulated the desire for a more intimate cooperation in cases which do not entirely lie within the fields of the orthodontist nor the otorhinologist, but are otorhino-orthodontic. Certainly such cases are not infrequent, and only by cooperation can we obtain results which will do us credit and secure for the patient the desired relief.

EXTENSION LOCK ATTACHMENT*

By W. A. McCarter, D.D.S., Topeka, Kansas

WITH all the many varieties of the lingual appliance locks that have appeared in the last few years, each with its own very good qualities and peculiar claims of efficiency, none has seemed to possess the quality of necessary rigidity or power of expansion or extension necessary for sufficient tooth movement.

In presenting this extension lock to the profession, I wish to state that while it may not meet all the requirements of a removable lock it has over-

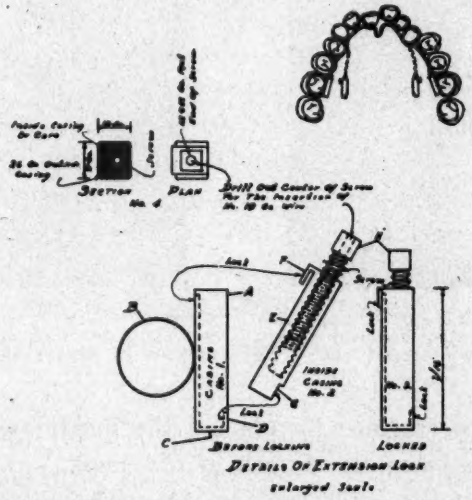


Fig. 1.—Showing the construction of the lock.

come some of the difficulties and has proved satisfactory in my hands and in the hands of other men of our specialty who have had opportunity to try it. Although far from perfect, I believe it to possess correct mechanical principles. In considering an attachment for a removable lingual wire, the points of rigidity, extension and easy removal were kept in mind.

The accompanying drawing (Fig. 1) shows the construction of the lock.

*Read before the American Society of Orthodontists, April 9-11, 1923, Chicago, Ill.

In this drawing No. 1 is a plan view showing the outside casing which is soldered to a plain anchor band for permanent anchorage.

No. 2 is a view of the inside casing which contains the extension screw and shows the hook which slips into a notch in the back wall of the outside casing and forms the upper part of the lock. It also shows the notch at the lower end of the inside casing which slips under the closed portion of the lower end of the outside casing forming the lower end of the lock, thus completely locking both ends of the extension screw casing.

No. 3 is a view showing No. 1 and No. 2 put together and locked. The

Fig. 2.—Showing removable lingual appliance with extension lock attachment, also double loop in center of arch. Auxiliary springs attached.

Fig. 3.—Showing removable lingual appliance and loop for expansion, also lugs on bands around first premolars to support the arch wire.

Fig. 4.—Showing removable lingual appliance and extension lock, also lugs on bands around canines to steady the arch wire.

locking operation is performed by placing the inside casing into the outside casing and sliding it down the length of the hook.

No. 4 is a view of the entire lock in transverse section, showing the outside casing, the inside casing, the extension screw, and the hole in the center of the screw for the reception of the expansion arch wire.

I have used mostly for this purpose Dee Ortho or Aderer No. 4 wire and find 20 gauge sufficiently heavy and rigid enough for all cases.

Fig. 2 shows a practical case with the removable lingual arch held in place by the extension lock. Expansion in the first premolar region is produced by straightening the loop in the center of the arch wire, and the incisors carried forward by tightening the extension screw in the lock. Com-

plete control of the centrals and laterals was maintained by the use of auxiliary springs as used and described by Dr. John V. Mershon.

Fig. 3 shows another practical case treated in the same way, the lingual expansion arch being steadied by small bands placed on the first premolars with a short loop or lug soldered to the lingual surface of the band midway between the occlusal and gingival edges of the band.

Fig. 4 shows an occlusal view of a case of marked labioversion of incisors, and high narrow arch treated with the lingual appliance in combination with Dr. Lourie's high labial wire, with finger springs to reduce the

Fig. 5.—Showing high labial arch wire with finger springs for depressing protruding incisor teeth.

Fig. 6.—Showing a case where a lingual appliance with auxiliary spring is practical.

inclination of the incisors. The high labial wire is attached to the anchor band by use of the Dr. Ernest N. Bach attachment. Retraction or shortening of the high labial wire when necessary is produced by closing a loop in the wire in front of the lock.

Fig. 5 shows small wire soldered to the labial surface of the steadying bands on the canines, and extending up with a loop bent on the end to engage the high labial wire to hold it in place.

Both lingual and labial wires are easily removed for adjustment and cleansing.

Fig. 6 shows a case where the lingual appliance is indicated and was successfully treated. The patient continued her vocal lessons and practice during treatment without inconvenience.

LINGUAL LOCK

By H. B. Hamilton, D.D.S., Ithaca, N. Y.

At the meeting of the Alumni Society of the Dewey School of Orthodontia, held in Chicago, March, 1917, Dr. Mershon described his lingual appliance. On my return home an attempt to make such an appliance with such materials that were at hand proved not entirely satisfactory, because the materials were not really suitable.

After again hearing Dr. Mershon at the meeting of the American Society of Orthodontists in Chicago, August, 1918, my second attempt was made, but desiring to obtain as great a rigidity as possible in the attachment, which was not satisfactory in my first attempts, an oblong pin and tube were used instead of the half-round tube usually used.

More or less difficulty was experienced in the use of the lockwire soldered anterior to the pin. A spring wire was difficult to lock in place and stay there, and a soft wire lacked in rigidity, but the greatest difficulty was the tendency to impinge on the gum. The lockwire soldered to the distal end

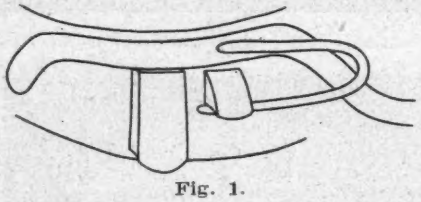


Fig. 1.

of the main wire also tended to impinge on the gum. To get the lockwire of either type under the end of the tube was often difficult, because it had to be sprung away from the main wire in order to get the pin in the tube, and then back again under the end of the tube to lock. Both forms were troublesome on the lower jaw and especially so in young patients.

With the short molars of the young patient it was found difficult to use a tube long enough to get a stable rigid attachment, and almost impossible to get the lockwire under the end of the tube without encroaching on the gum.

Attempting to avoid this difficulty a lug was soldered on the band a little anterior to the tube. A recurved wire was soldered to the main wire and locked under the lug. (Fig. 1.) This lockwire made the inserting of the appliance very easy as it did not interfere in any way, but slipped over the beveled lug and snapped into place. This lockwire added to the rigidity of the appliance anteriorly. It added a little to the bulk and unless carefully constructed was likely to hold food particles in the embrasure.

To obviate that danger the lug was soldered on the tube and the lockwire soldered to the posterior end of the main wire. (Fig. 2.) This oblong pin and tube form of attachment is very rigid, and the molar can be rotated or tipped at will.

The oblong pin is 14 x 21 guage and fits the tube very snugly. Both are platinum gold. The tube is soldered clear to the lower edge of the band and the lower end beveled with a slight concave toward the band, so the tube can come close to the gingival margin and fit over it. This permits the longest possible tube and pin and gives the greatest stability.

The end of the pin is shaped exactly as the lower end of the tube and exactly the same length when seated. To add to the strength of the soldered joint of the pin, to the main wire in the end of the pin a slight concave groove is cut the long way, making a closer fit to the round wire. A thin carborundum separating disk is used.

The main wire is Aderer's No. 4. Noxidium E 22-gauge wire has proved the most satisfactory in my hands for the lock wire. It is soft enough to be readily forced into place and stay put, and at the same time has a slight stiffness or spring to hold tightly.

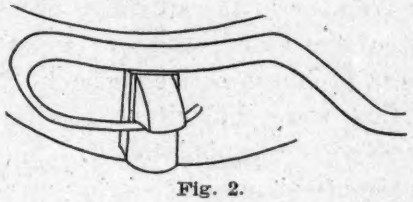


Fig. 2.

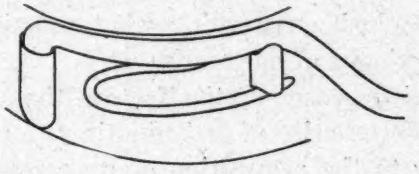


Fig. 3.

Trouble is occasionally experienced by the breaking of the main wire immediately anterior to the tube. Attempting to obviate this a round tube as long as the gum would permit and slightly flattened on the side to be soldered, was soldered at the posterior corner of the band. Another piece of tubing was similarly soldered at the anterior corner, with the upper end at the same height as the posterior tube, but with the lower end as far from the gum as possible. The end of the main wire is bent at a right angle to form the pin, and the wire is formed to the contour of the tooth and rests on the top of the anterior tube, which is slightly concaved, giving stability to the appliance. The lockwire, in the form of a recurved spring, is soldered to the main wire just posterior to the anterior tube. (Fig. 3.) Or it may be soldered to the main wire just anterior to the posterior tube and bent forward at a right angle and snapped under the anterior tube. The recurved lockwire seems to give a little more rigidity to the appliance than the other types.

PROBLEMS THAT ARISE IN THE CONDUCT OF AN ORTHODONTIC PRACTICE*

By Landis H. Wirt, D.D.S., South Bend, Indiana

THE preparation of this paper has been prompted by my experience in entering upon the practice of orthodontia as a specialty in a city of about seventy thousand inhabitants, in which there was no other orthodontist upon whom to call for much needed advice.

Although more than fifteen years had been spent in general practice, it was soon found that the experience gained therein was not adequate to apply to all the questions of policy and management which presented in the new field, and since my training in the specialty necessarily did not include an exhaustive treatment of the management of a practice, it became necessary for me to solve these problems of management unaided. This resulted sometimes in mistakes that were difficult to rectify, and which were the source of much worry and some disappointment.

It shall be the purpose of this paper to bring up some of these problems for your discussion in the hope that through a free interchange of ideas we may arrive at a conclusion regarding what constitute the best methods to apply to the routine phases of our work.

Let us consider briefly some of the factors that present themselves to anyone entering upon the practice of orthodontia as a specialty, and see what relation they may bear to the acquisition of a successful practice.

In considering the specialty as a desirable field in which to engage, the dentist may have been influenced by a number of things. Perhaps he has heard something of the fabulous fees that orthodontists are said to receive for their services, or he may entertain the idea that the work is less grinding than a general practice, or maybe he is one of those great hearted individuals who have seen in this field an opportunity for useful service to others, particularly children.

We may assume that he has prepared himself for the work by taking a course of study in one of the schools that provide the special training required to fit one for this work. His first thought will be directed to the choice of a suitable location in which to build his practice.

It is perhaps but natural that in the earlier days of orthodontia, those who were the pioneers in the field were located in the larger cities. As additions have been made to our ranks, we find men in the smaller cities, and even in large towns there are men who are limiting their work to the correction of malposed teeth, and as the public becomes more and more familiar with what we are doing and why, we shall see a still wider distribution of those who are engaged in this work. For malocclusion is

*Read before the Alumni Society of the Dewey School of Orthodontia, April 12, 13, 1923.

equally as prevalent as caries and other affections of the teeth, and the people are becoming more enlightened in regard to the need of correcting it.

The conduct of an orthodontic practice in a smaller city requires somewhat different methods from the metropolitan practice, and as a rule one is dependent on his own resourcefulness to find what are the best methods, because there are no neighbors at hand to whom to go for advice.

In the present state of professional enlightenment among dentists generally, it is my belief that it will usually be found extremely difficult to establish an orthodontic practice that will be satisfactory from the financial standpoint in a city of less than fifty or sixty thousand inhabitants, unless the dentists therein are unusually alert and progressive and the public thoroughly alive and prosperous.

If there were nothing to consider save the need of one's services, I dare say it would be possible to have quite all one could do in cities or towns much smaller than fifty thousand. But unfortunately, there are many families who cannot possibly afford this service, and a large number who might find the money to pay for it, but who prefer to spend it for an auto, or to buy costly furs or diamonds, or to go away for the winter to Palm Beach. They do not understand the need of orthodontic treatment for their children, or perhaps never heard of such a thing; and more probably their dentist does not know enough about it or care enough to bring it to their attention intelligently. A great amount of pioneering is found necessary and a great deal of educational work is needed both among the members of the dental profession and the general public before one can reasonably expect to acquire a large patient list.

What, then, may legitimately be done in this direction? Our code of ethics as well as our inherent sense of right conduct forbids us the use of the avenues of publicity that are open to those engaging in mercantile pursuits. We owe our allegiance to this code for the protection it gives to the dignity of our calling and because it is based upon right principles.

This code is not a law that has been forced upon us by some arbitrary power, but is one that we ourselves have evolved from the experience we have gained. It is no hardship, therefore, for us to abstain from such means of attracting a practice.

Unfortunately, there are occasionally found those among us who stealthily go about, offering commissions to those who will refer them patients, and practicing various methods of quackery upon the confiding public under the guise of orthodontia.

There are, however, legitimate means at our disposal through which we may properly become established and retain our self-respect and that of our colleagues.

It has become an axiom that he who serves others without thought of self, serves doubly. The good that we do to others eventually returns to us in double measure, and we are well repaid. The public are hungry for in-

formation and there are always opportunities for giving talks before mothers' clubs, parent-teacher organizations, and other civic bodies.

Everywhere there are being organized dental study clubs, and it is gratifying to note the increase in interest in our work among State and District Dental Societies. We should neglect no opportunity for giving clinics at these meetings whereby we may be the means of impressing upon the general practitioner his responsibility in having his little patients, who are developing malocclusion, placed in competent hands for treatment.

We have an opportunity of educating the laity in orthodontic matters every time a patient comes to us for consultation. Let us give them all the information we can whether they become our patients or not. It is surprising how many people will find the money, one way or another, to have their children given treatment when once they fully understand the relation these defects have on the whole future of the child.

I would urge, therefore, the desirability of encouraging dentists to send in all cases that come under their observation, whether they appear to be financially able to avail themselves of our services or not.

Our hypothetical newcomer into the specialty has found a suitable location, and made discreet use of his opportunities for disseminating information, and has probably undertaken the treatment of a number of cases. But he soon begins to see that there is a vast amount of indifference among dentists on the subject of occlusion, and unless he is extremely optimistic he may get not a little discouraged over his inability to enlist their support. He has been trained to think of his specialty as one dealing with a very necessary work; he gets on a street car or he walks up the street and sees nothing but malocclusion. When he visits his neighbor who has children he finds it difficult to refrain from volunteering advice about habits that he sees them practicing.

When he goes to a dental meeting he sees many of his former colleagues whose teeth are in a frightful condition of malocclusion, and when he sees their children, he will begin to doubt their sanity since they have permitted them to develop such deformities, and he will look forward hopefully to the day when Dr. So-and-So brings in his little son or daughter and places them in his care for treatment.

He will probably wait a long while, because Dr. So-and-So is busy and cannot very well leave the office, and perhaps does not have much faith in this "specialty stuff" anyhow. But suppose he does happen to be one of the more progressive kind and does bring them in? What is it customary to do in the matter of charging for the service? If a charge is not made, will it not be about the same as the offering of a commission on cases referred? And should this form of professional courtesy be extended to physicians in the locality as well as to the dentists? And what about the childless dentist who brings in his cousin or his brother's child for treatment?

In my own practice these are some of the problems that have come up to perplex me, and in the solution of which I have not come to any satisfac-

tory conclusion. In any city where there are fifty dentists and twice as many physicians, it would be quite possible for one to become so overloaded with these cases as to prove a burdensome form of courtesy. This is one of the phases of practice in a specialty that is supposed to be composed of referred business almost entirely, that can prove very annoying.

It makes one wish the time would come apace when our practices will be filled with patients who have been brought to us direct without reference from a dentist. To my mind, this would be the ideal condition, and I can see no reason why it should not be eventually brought about. We cannot expect the average dentist whose own income is often none too large, to spend much time talking orthodontia to his patients, only to see the orthodontist get what to him is a perfectly enormous fee, while he gets nothing.

In the first place, the majority of dentists know almost nothing about the possibilities of orthodontic treatment, and when they send us a case they too often expect us to "straighten a tooth" here or there, never dreaming that we must consider the mouth as a whole and cannot think in terms of one tooth. The ignorance of many dentists in these matters is nothing short of stupendous. As long as they admit that they know nothing of orthodontia and care less, what can we hope to do to accomplish their enlightenment? Is it not possible that the dental schools are at fault in this?

Is there not something that we, as an organized body of specialists, have omitted to do to increase their interest and information in matters pertaining to occlusion? If so, what are we going to do about it? I believe something can be done, and I should like to see a beginning made soon.

This ignorance and indifference exists as widely among the public as among dentists. The former have perhaps the better excuse. If we have in times past been looked upon as parasites upon the rich, as someone has said, the time is at hand when we can no longer remain indifferent to the fact that since occlusion is the fundamental basis of all preventive as well as restorative dentistry, we are in a position of utmost importance, and the public will in future look to us more and more for measures of relief from loss of teeth.*

There can be no truly preventive dentistry that is not based on correct occlusion. The factors that must enter into the natural development of correct occlusion are largely prenatal, while those that modify development and bring about malocclusion are, as often as not, operable during the years immediately after birth.

Any effort directed toward the insurance of the development of correct occlusion is likewise an important factor in the insurance of the well-being of the teeth in every other way. If we accept this as good reasoning does it not follow that true preventive dentistry is primarily a function of the orthodontist? If that is true it would appear that one of the most important duties of orthodontists is concerned with the spreading of proper information regarding the teeth among the public.

If our work is to be classed as a necessary service rather than as a luxury for the wealthy few, the public have a right to know more about it. The question is, "What have we been doing or what can we do in the direction of advancement of public information about the teeth?" This is indeed one of the most important of the problems that are encountered in the conduct of an orthodontic practice. It is up to us as an organized profession to decide upon and adopt some means of acquainting both the general practitioner and the public with what we are doing.

The man who enters into the practice of orthodontia is early confronted with the question of fees. What is a fair fee for a given case, and how is the amount to be decided? Shall we "charge all the traffic will bear" on the theory that whatever they pay the service is worth more? Or shall we be governed by a spirit of altruism and try to make our fees on a cost plus basis?

No doubt we have all arranged these matters for ourselves on a satisfactory basis, but there are times when we have occasion to refer cases to a colleague in some distant place and we find that we have been getting too little or too much as compared with other's fees. We find also a considerable variation in practice in regard to the systems of payment. Many of us probably have several methods of dividing the fee. Some advocate charging on a time basis, so much for appliances and so much per month or year, leaving the total amount to remain indefinite. Others set the fee at the beginning as a definite sum, and perhaps they encounter difficulties which cause them to wish, before they are through, that they had charged twice the amount.

It is my opinion that these are matters that have to be adjusted differently to suit different conditions, as they are found in small cities or large metropolitan practices. But if we could have a discussion of such questions when we get together, we might be enabled to bring about a greater uniformity of practice which would benefit us all.

There are many other matters of the conduct of a practice that might profitably be discussed, such as how to handle patients who repeatedly fail to keep appointments; who neglect to properly brush the teeth and appliances; whose parents are slow pay; younger patients who would like to convert the office into a play room while they are waiting; and many others who require special handling.

It would be interesting to hear the views of those present on the procedure to be followed in turning over patients to another orthodontist when they go to another city to reside, or when they go away to school.

It should be profitable to learn the views of our colleagues as to the proper attitude one should adopt toward the dentist who thinks he can take care of cases he sends us, if we will but get them started and give him advice and instruction from time to time.

Then there is the always present tendency on the part of many parents to think that we should not get the children out of school for their appoint-

ments. This is a matter that may require some diplomacy in enlisting the cooperation of the school authorities. They may not be as alert to the physical needs of the pupils as they should, and they do not like to have anything interfere with their classroom routine.

There is the matter of case records. Some men keep no records at all other than of payments made, while others go into such a maze of detail as to require a great deal of time and attention that might better be employed in caring for a few more patients.

In my own office, I have recently adopted a plan of recording each thing that has been done for a patient at each visit, noting the time in the chair, and what I propose to do at the next visit in some instances. I find these notes a great help in time saved and weight taken off my mind.

If the time were available something might be said of office arrangements as differing from that in general use by dentists.

However, since it is the primary object of this effort to place some of these problems before you and not to presume to tell you how an orthodontic practice should be run, I shall be content if I have brought about the opportunity for others to present their problems as well, and afford us all a means of improvement.

SYMPOSIUM ON THE RESULTS OF CASE TEACHING AT THE HARVARD CLINIC*

By Lawrence W. Baker, D.M.D., Adelbert Fernald, D.M.D., and Fred R. Blumenthal, D.M.D., Boston, Mass.

Dr. Lawrence W. Baker.—It is a matter of common observation, I believe, that the most active and most progressive minds among us are all interested in orthodontic education. We are interested in problems pertaining to the training of those who are to follow us. I, therefore, hope that this symposium, conducted by Dr. Fernald, Dr. Blumenthal and myself, will be of interest to you, because we are to show you the results of case teaching in orthodontia. In other words, we are to show you the results that students themselves have obtained in practical orthodontia in our clinic.

We have so much to show you, and we are so enthusiastic over what these young men have accomplished that I am going to call on Dr. Fernald and Dr. Blumenthal without further introduction.

Fig. 1.

Dr. Adelbert Fernald.—I thought it might be interesting if I would read you a few notes of data in regard to the early history of orthodontia in Boston, showing the influences leading up to the present time.

"In 1814," Benjamin James, of Boston, states in his book, "When teeth are irregular they are to be pushed to place with the fingers." In the museum, we have models with full data showing original appliances of cases treated in 1848 by Dr. Olonso Preston who lived to be nearly ninety years old.

Dr. I. Salomon for a number of years practically specialized in treating irregularities in Boston in 1845 to 1860.

When the Dental Department of Harvard University was organized, July 17, 1867, the faculty decided that irregularity of the teeth should be treated and in the first announcement and in every catalog since it is so stated.

Wishing to get all the data I could on these school cases, I wrote one hundred letters to the early graduates and find that while in school they

*Presented before the American Society of Orthodontists, Chicago, Ill., April 9-11, 1923.

treated these cases by means of piano wire springs, wire crib plates, rubber plates with wooden pegs, and rubber bands of which I will show several specimens made and used by the students. I will show practical cases before and after treatment with original appliances. No cases are ever turned away from our clinic because of being too difficult to treat. If their age is favorable, we do not hesitate to take charge of the case.

This model (Fig. 1) I ran across in the museum made by Dr. Olonso

A Fig. 2. *B*

Fig. 3.

A Fig. 4. *B*

Preston in 1848. His original appliance is still in place, designed I presume to rotate these two centrals. There is a little nut and a screw here. That is the first model that we have full data on when treatment was begun on the case. I have not the model, at least I have not found the model showing the case completed.

Figs. 2-*A* and 2-*B* show a case treated in 1859, showing the method they used at that time trying to straighten teeth with threads ligated to the different teeth.

Fig. 3 was made by a student in 1872. Here is the labial surface of the same appliance. Remember, this appliance was made in 1872, over fifty years ago, and I think I can safely say that Dr. Crozat and Dr. Jackson perhaps have never seen this appliance, although it might be of interest to

Fig. 5.

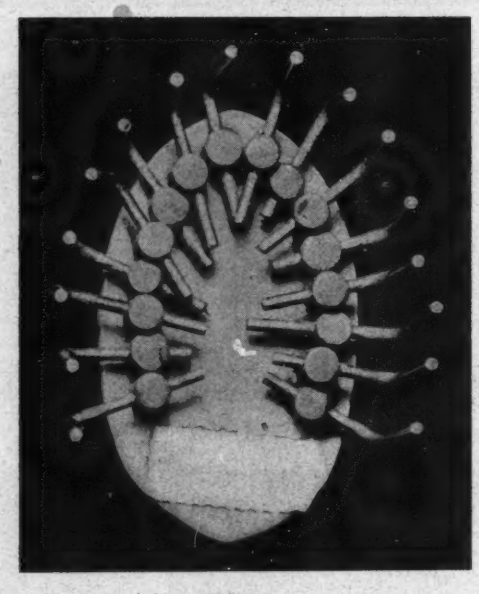


Fig. 6.

Fig. 7.

Fig. 8.

them the way these wires are bent around the molar teeth, called a crib plate.

Fig. 4-*A* shows another early appliance, a rubber vulcanite plate with gutta-percha pockets packed in to press the teeth outward. Fig. 4-*B* is with an elastic band to retract laterals or canines. Fig. 5 shows two types of the

piano wire springs expanding the mouth. I simply show these that you may see some of the early work of the students. These appliances are now on exhibition in our museum.

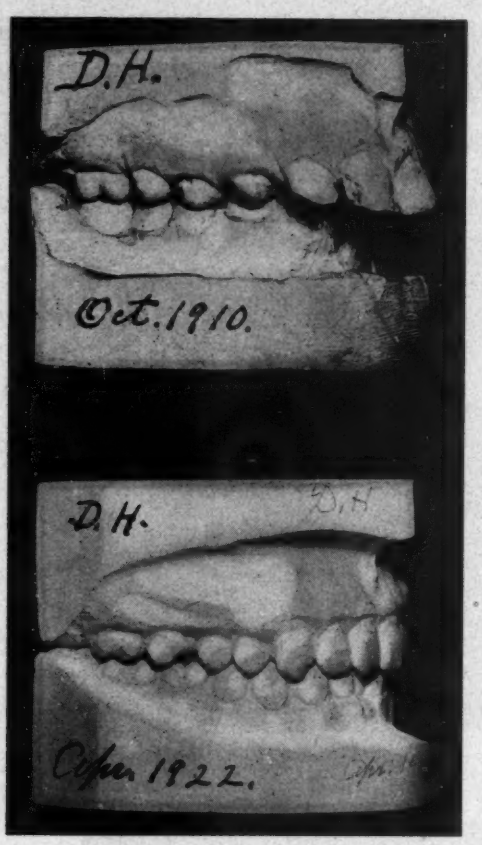
An interesting relic is shown in Fig. 6 which may be of interest to some of you, especially to Dr. Gilpatrick, Dr. Johnson or Dr. Stanton. This is a little appliance made of ivory, brass and steel. There are sixteen of these arms, one for each tooth in a full set. These can be moved backward or forward, in or out. It is marked D. H. (Daniel Harwood). I have been told it was designed and used by him in 1850 or 1855 for the purpose of predetermining the size of the arch. I do not know just how it was used, unless these mov-

Fig. 9.

Fig. 10.

able arms were adjusted to every irregular tooth wherever that tooth happened to be, and a mark placed on a chart. Then these arms were pulled out and moved backward or forward according to where they wished the tooth to be in the ideal arch as the operator determined it should be made and then another chart made. I simply show it as an interesting dental relic; it is beautifully made. I am sorry I cannot tell you something more definite about it.

A case with an original appliance, rubber plate with piano wire springs is shown in Fig. 7. Before treatment the right and left first premolars were extracted and with the springs the anterior teeth were retracted to this position. The upper part of the model does not show very plainly. The student painted the model black so it does not show in the photograph. This



Figs. 11 and 12.

Figs. 13 and 14.

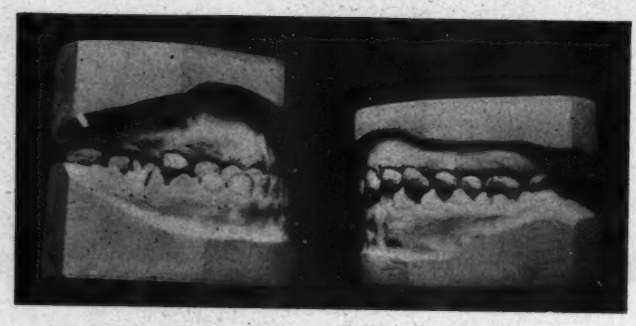


Fig. 15.

Fig. 16.

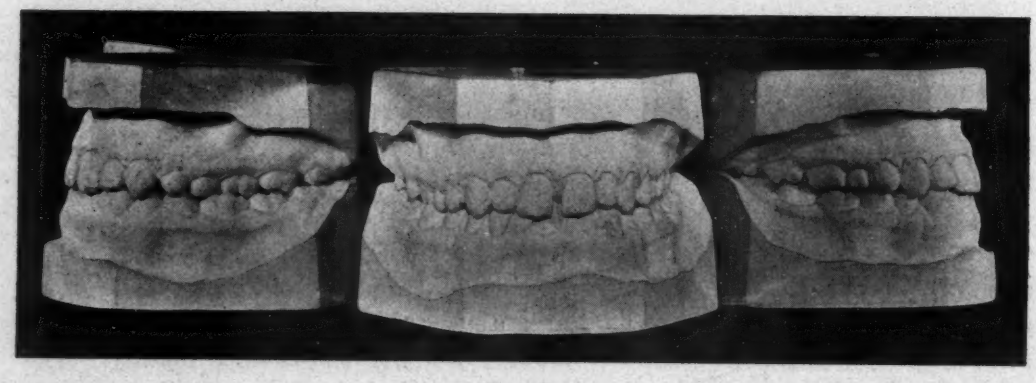


Fig. 17.

case was treated about forty years ago by one of the students. Fig. 8 shows the completed case.

Figs. 9 and 10 show a case in Dr. R. Gove's section. You can see at a glance what has been done.

Figs. 11, 12, 13 and 14 show case in Dr. Howe's section.

Fig. 11 shows a case before treatment and Fig. 12 shows the results ten years later, or ten years after all the retainers had been removed. Fig. 13 is the boy's profile before treatment, and Fig. 14 is the profile ten years later.

Fig. 15 shows an unusual case of Class III type. Five months after the treatment was begun the appliances were entirely removed. I decided that I would not have any retainer placed on the case. I watched it for two months to see if the force of occlusion would hold it. The result five months after treatment (a boy fifteen years old) is shown in Fig. 16. The case as it is today, nine years later, is shown in Fig. 17. The force of the occlusion has opened a little space between the two centrals.

I would like to say in closing that last year we turned away from the clinic over five hundred cases that we could not treat. We are rushed to the limit. If we do not do this work for these patients, no one will, because they cannot afford to go to a specialist, and specialists cannot do charity work all the time.

Dr. Fred R. Blumenthal.—In presenting three or four cases from the Harvard Clinic, I wish to state that I shall by no means endeavor to show

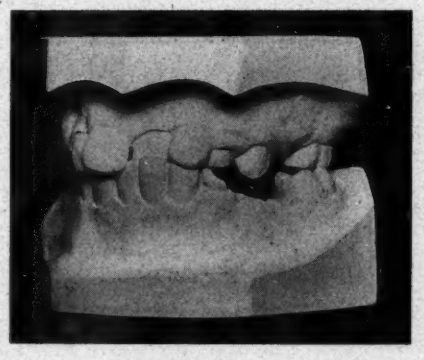


Fig. 1.

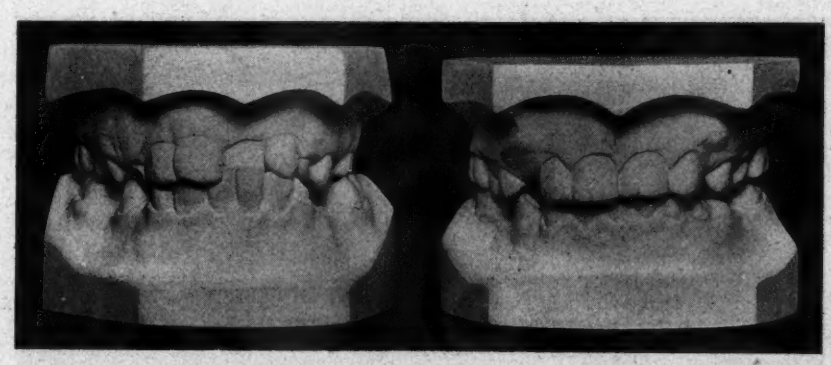


Fig. 2.

Fig. 3.

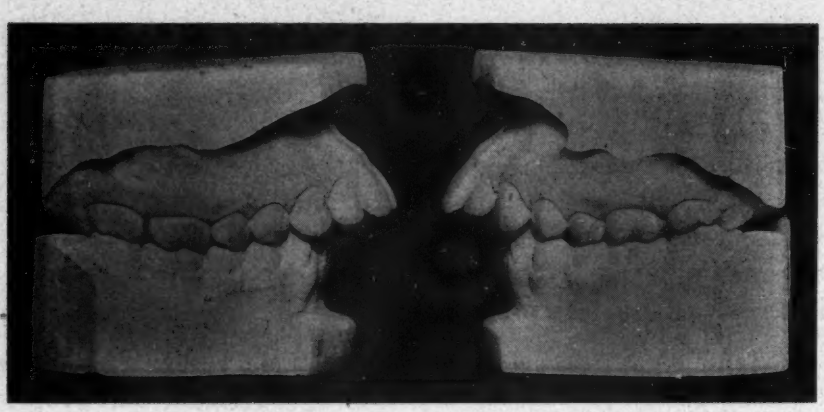


Fig. 4.

Fig. 5.

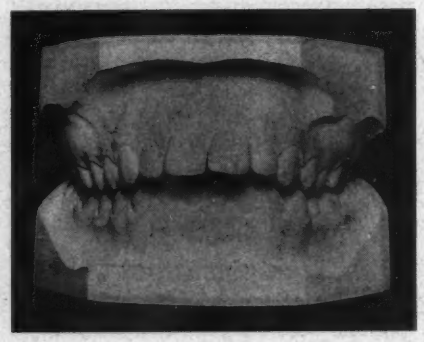


Fig. 6.

Fig. 7.

Fig. 8.

Fig. 9.

Fig. 10.

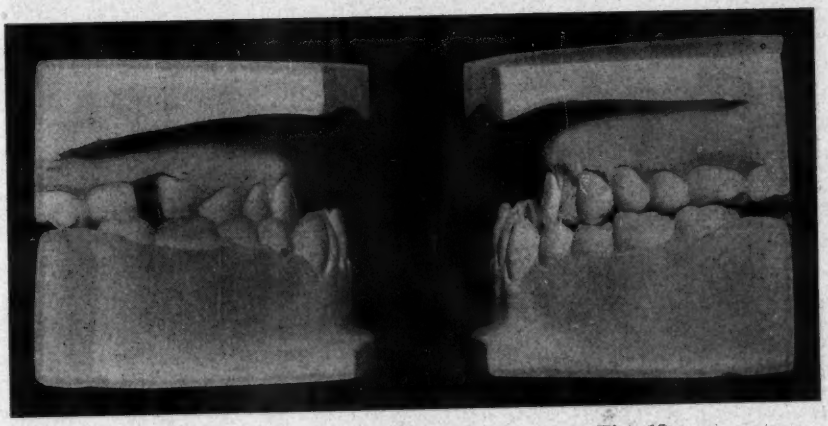


Fig. 11.

Fig. 12.

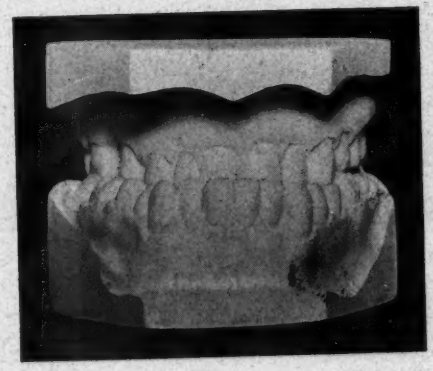


Fig. 13.

any unusual or freak cases, neither shall I attempt to show any miraculous or "perfect" results. You can see and read those in the magazines, but I do wish to show what we are doing for hundreds of children every year at

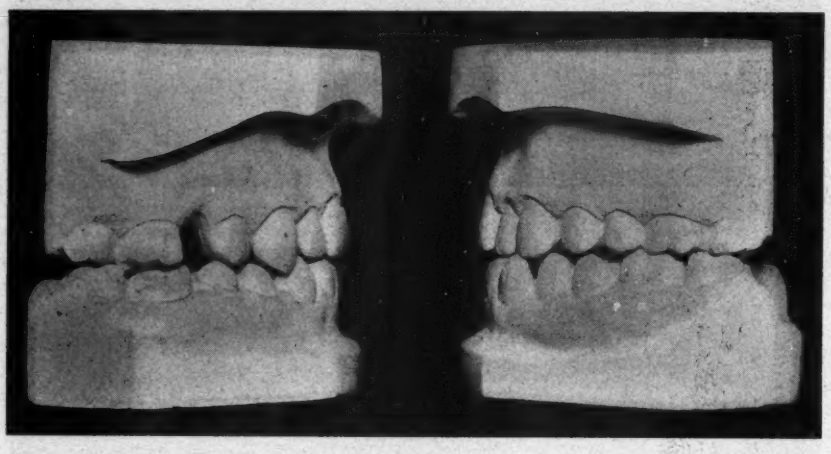


Fig. 14. Fig. 15.

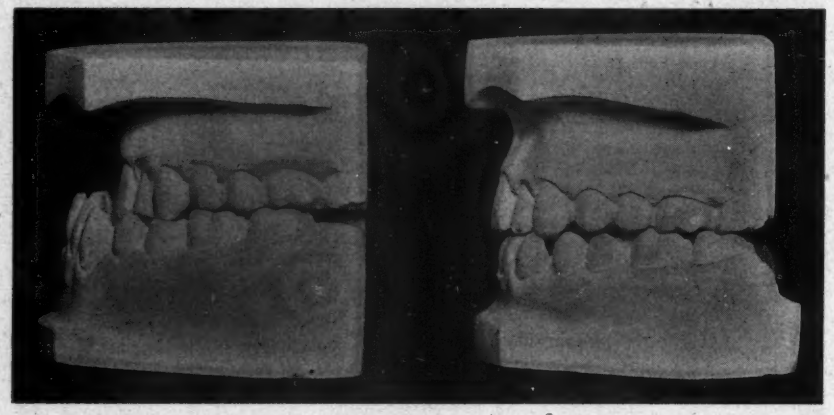


Fig. 16.

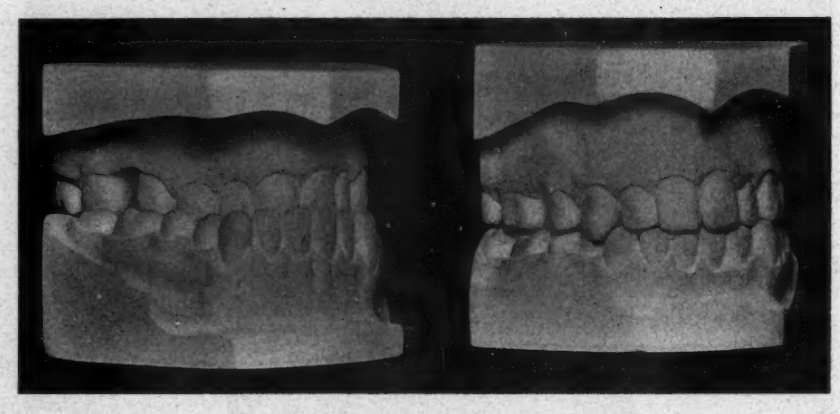


Fig. 17.

our clinic. I merely wish to have you think it over for yourselves, and from these few cases decide whether or not you feel the work which we are doing is worthwhile for those children, many of whom are really poorer than poor.

Case 1.—The first case, aged ten, is of a very simple type and not difficult to treat. This little girl is one of the "poorer than poor," and is an inmate of a home. The home itself was so poor that it could not afford to pay the fifteen dollars for the platinized gold appliances so the federated

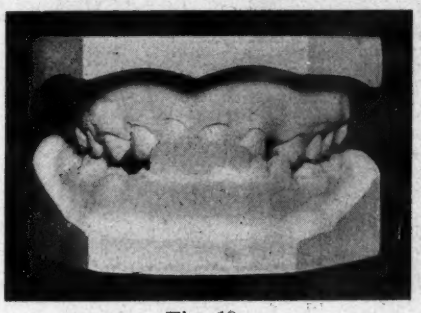


Fig. 18.

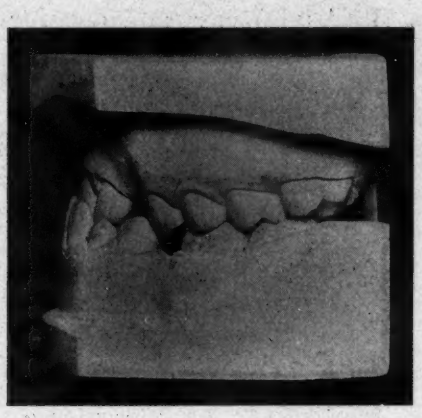


Fig. 19.

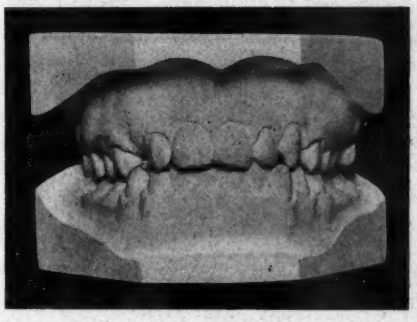


Fig. 20.

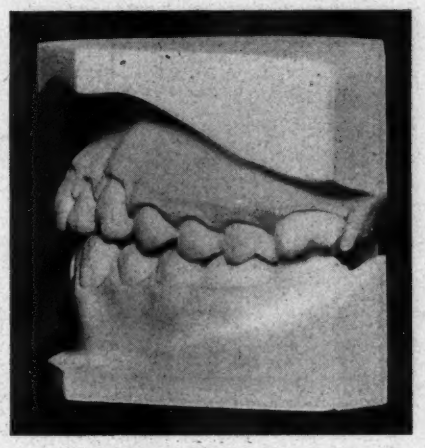


Fig. 21.

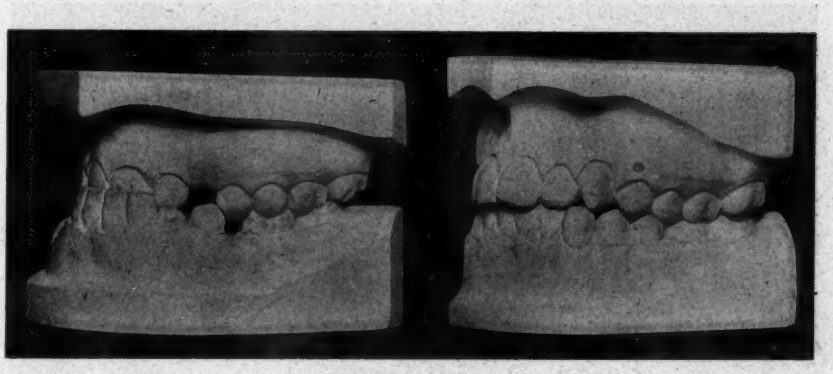


Fig. 22.

charities were called upon for aid. Fig. 1 shows the case before treatment. The right maxillary central incisor is in linguoversion and there is a lack of development in the right maxillary canine region. The child had one school year of orthodontic treatment and Fig. 2 shows the result obtained. The mandible developed normally when the interference by the maxillary teeth

was corrected. Unfortunately I have no photographs of this child yet I believe you can all picture the unsightly appearance of this young lady to be, if left untreated. Fig. 3 gives the occlusal view.

CASE 2.—The next is a case of a young girl about fourteen years old. A Class II (Angle) case and one for which a perfect occlusion could hardly

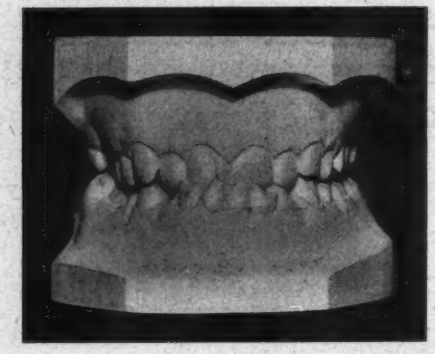


Fig. 23.

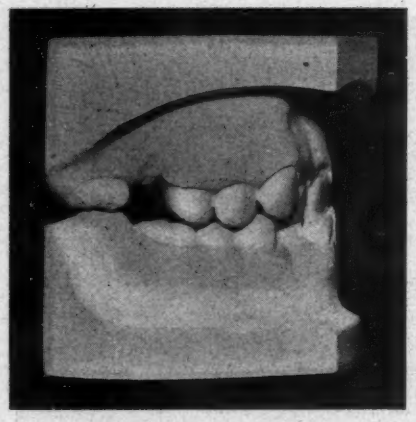


Fig. 24.

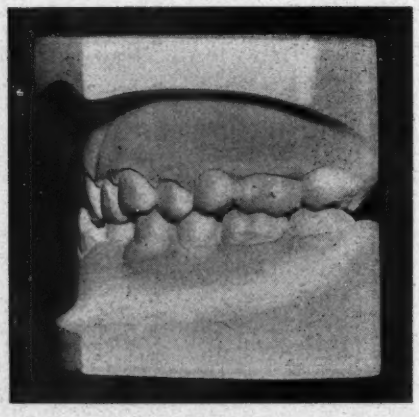


Fig. 25.

Fig. 26.

be expected, but I will show you what has been done for her, and the results obtained by a student. Figs. 4-10 show various views before and after treatment. The teeth have not completely settled as yet and radiograms have been taken which show the third molars are absent. I believe the jaw relations will be permanent.

Fig. 27.

Fig. 28. Fig. 29.

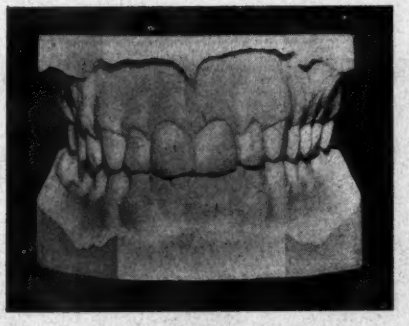


Fig. 30.

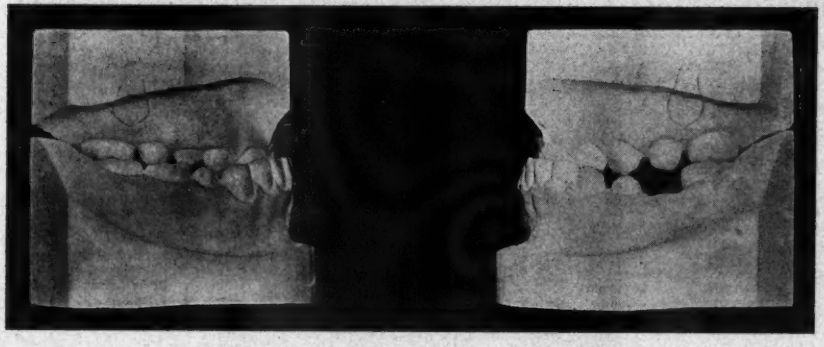


Fig. 31.

CASE 3.—This little girl was not only poor but very homely; and the combination of poor and homely is not very good for a girl, so we tried to

Fig. 32.

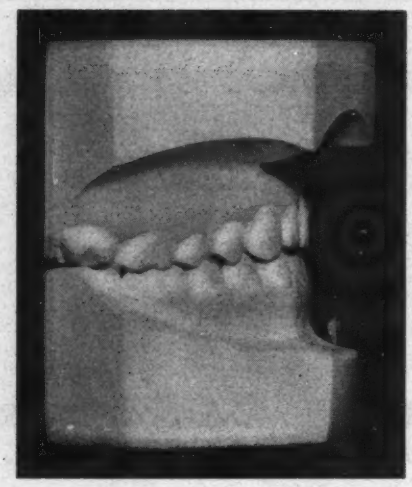


Fig. 33.

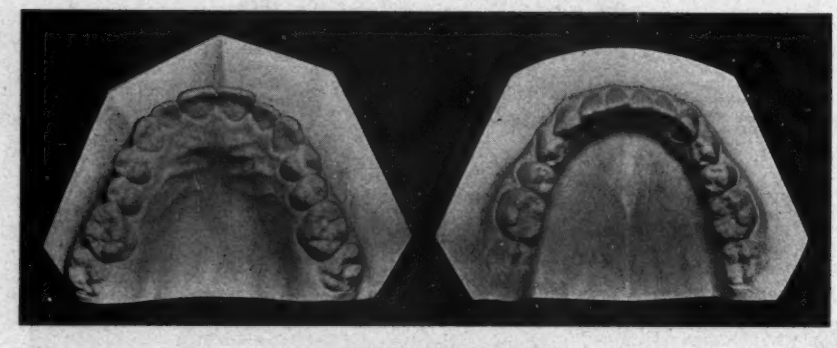


Fig. 34.

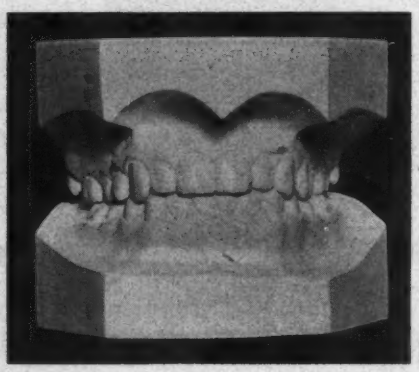


Fig. 35.

do something for her. Her face was twisted as you can well imagine it might be with the marked mutilation of her teeth. It is a Class III (Angle) case. Figs. 11-17 show the condition and results of treatment.

CASE 4.—This case is quite difficult for a student, for the left mandibular second premolar had insufficient space to erupt and in these Class III cases, by the use of the intermaxillary elastics for the retraction of the mandible, there is a tendency to close the spaces (Figs. 18-22). Results after treatment: mandible brought back; molars in good relation; premolar erupted, the teeth holding in that position; slight irregularities yet a permanent and good result.

CASE 5.—This was a little newspaper boy. At the second semester he did not come in and we sent for him. He explained that he did not earn enough money to make the second payment of ten dollars and he could not get it at home.

From faulty occlusion the incisal edges of the mandible incisors were broken off during mastication. He said that when eating hard foods a piece of tooth would occasionally break off. The left maxillary canine seen in position is a deciduous tooth, the permanent canine is unerupted and lies horizontally in the palate. The lateral view shows the maxillary incisors in lingual occlusion, the right maxillary first molar is absent, having been extracted. Occlusal view shows the left maxillary unerupted canine diagrammatically drawn, and the marked lingual displacement of the mandibular canines.

The occlusal view after treatment shows the right maxillary second molar brought forward, and closing the space of the first molar, the permanent left maxillary unerupted canine now in position and mandibular canines in good alignment. The anterior view shows the position of the maxillary anterior teeth and overbite. Results are not perfect yet permanent and good (Figs. 22-30).

CASE 6.—The next case I am going to show was partially reported once before. Just before I left Boston, by coincidence, this girl, (now in college) came into my office and I took photographs of her, which show the result about seven or eight years after the orthodontic treatment at the Harvard Clinic (Figs. 31-35).

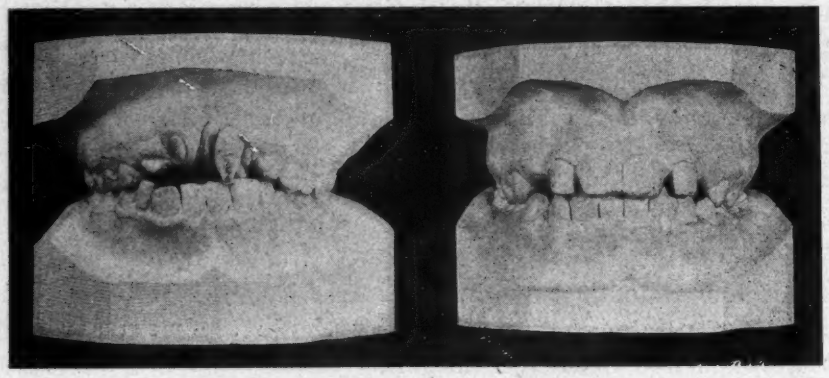
Some of you will unquestionably say that these are selected cases. True—not every case in the clinic is exactly as those shown, but I have attempted to show specific types and results obtained entirely by students under my direction and supervision, and I can honestly say that our percentage of successful cases, that is, as successful as these just shown, is practically as high as in most of our private offices.

Dr. Lawrence W. Baker.—I would like to conclude this symposium by showing you some after-results of cases that were treated years ago, and you can judge for yourselves what permanent good has been done for these dental cripples.

CASE 1.—Fig. 1-*A* shows an unusual type of Class I. Observe that the maxillary left central incisor has erupted in complete torso-occlusion, the mesial surface presenting itself anteriorly, and the right central incisor is coming in, in a precisely similar manner.

In Fig. 1-*B* is shown the result of two years of treatment. The appreciation of the parents of this little child so stimulated one of the students who worked on the case that he decided then and there to become an orthodontist —so he studied further and is now one of us.

Although this case was treated some twelve years ago, I well remember this little rosy-cheeked, blue-eyed girl. I can see her now, in my mind's eye with her two little pig-tails down her back. Fig. 2 shows her as she is today, twelve years later.



A Fig. 1 B

Fig. 2.

Case 2.—In Fig. 3 is shown another Class I case, with the maxillary incisors in lingual occlusion, perhaps better known to the younger element as a case of neutroclusion with linguoversion of the maxillary incisors. Not a particularly difficult case to treat perhaps, but nevertheless a most instructive one from the teaching standpoint, for it presents to the student a wonderful study of the far-reaching influences of the malocclusal forces, for as you know, these malforces have brought about an arrest in the development of not only the maxillary dental arch and the maxilla, but also all the internal structures of the face have shared in this arrest in development.

As was just mentioned, this was not a particularly difficult case to treat,

it being necessary only to carry the four incisors forward to their normal positions, and thus open up the space for the four impacted premolars and two canines. All this was accomplished in one school year, treatment being started in October, and all appliances removed by the last of May, no retainers being necessary.

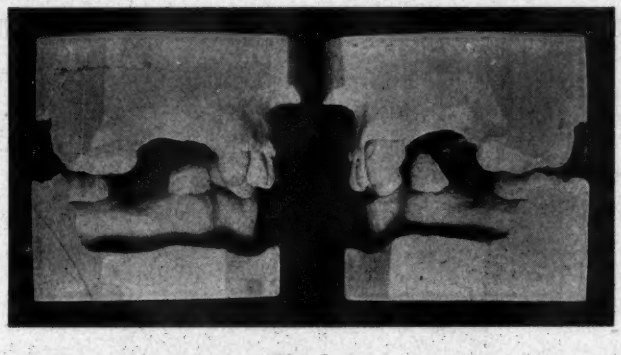


Fig. 3.

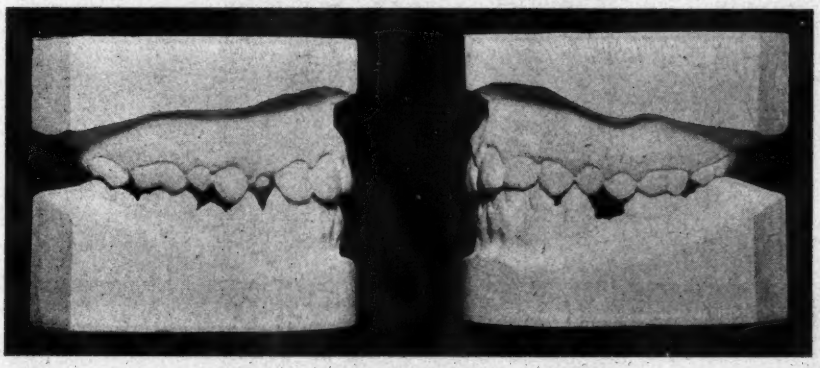


Fig. 4.

Fig. 5.

Fig. 4 shows the condition six years afterwards. Observe that during this interval the four premolars have come to place and the canines have plenty of space to take their positions.

What a wonderful study this was of the forces of occlusion, for in bringing about this result, the student could not help sense the great power of

occlusion and its far-reaching influence on the development of the bones of the skull.

In Fig. 5 is seen the palatal aspect of the arch before and after treatment, and what a study this is in bone development, in bone stimulation, by applied force!

The little boy himself is shown in Fig. 6, no longer a dental cripple.

Fig. 6.

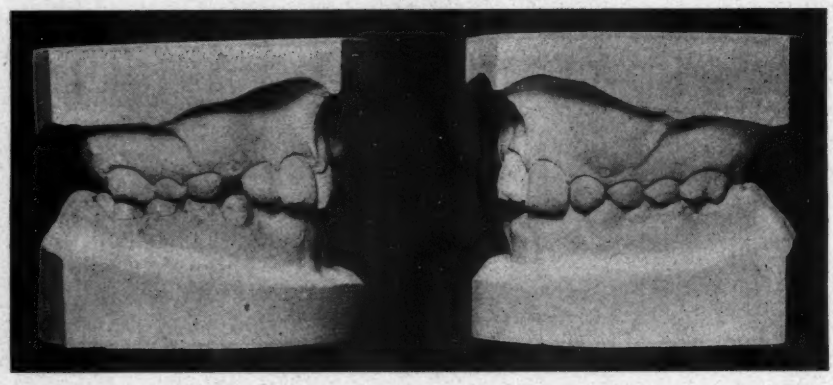


Fig. 7.

CASE 3.—Fig. 7 illustrates a Class II case, complicated with a complete impaction of the maxillary left canine and a partial impaction of the right canine. The case is further complicated by the loss of both mandibular six year molars. This case entered the clinic October, 1917, and in Fig. 8 is shown the condition today, six years after.

Fig. 9 shows the patient himself and one can observe how well the work is holding. A fine type of an intelligent boy, in fact he is the son of one of Boston's respected school masters. Working for patients of this type is just why the members of the orthodontic staff are so willing to sacrifice so much valuable time to the clinic. They know they are giving the students valuable

knowledge, and the imparting of this knowledge is a true service to the patients.

CASE 4.—On the left in Fig. 10 is seen the face of a sufferer from distal occlusion in its most common form. On the right the transformation—a bright intelligent face.

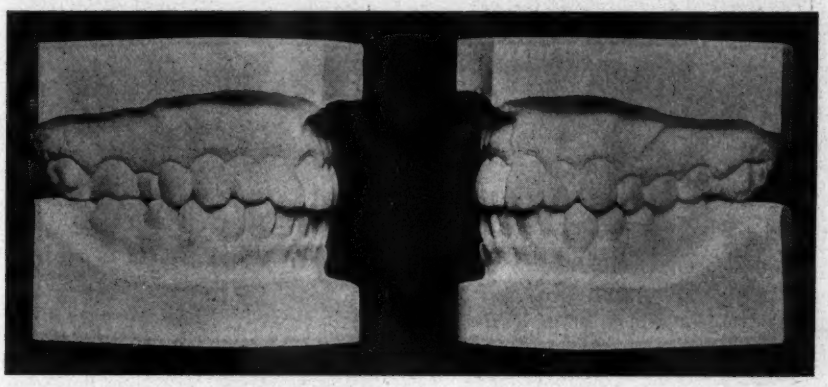


Fig. 8.

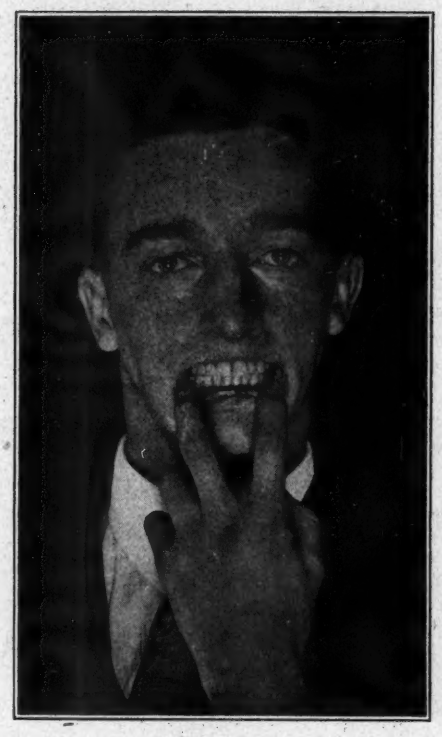


Fig. 9.

CASE 5.—Fig. 11 shows another Class II case. In bringing about this result, the keen-eyed student remarked that he observed a great improvement in the patient. At first the boy was bashful and diffident, but since his maxillary arch was expanded and his mandible brought forward, he is a different boy. The student had discovered for himself something we all know, and that is the far-reaching influence of these deformities, for they go deeper

Fig. 10.

Fig. 10.

Fig. 11.

Fig. 11.

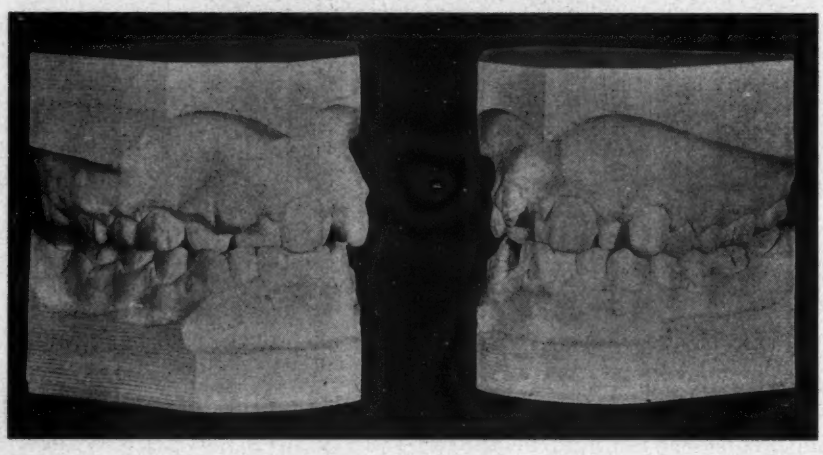


Fig. 12.

than mere facial disfigurements; they penetrate to the highest nerve centers. The treatment has brought about a psychologic change.

CASE 6.—The case shown in Fig. 12 would test the skill of the most ex-

perienced of us—a case of dental chaos. It is certainly a test for any method, procedure or appliance.

Fig. 13 shows the result. The students have brought order out of chaos. They have not only performed a mechanical achievement, but at the same time they have brought about a real biologic triumph. A beautiful example

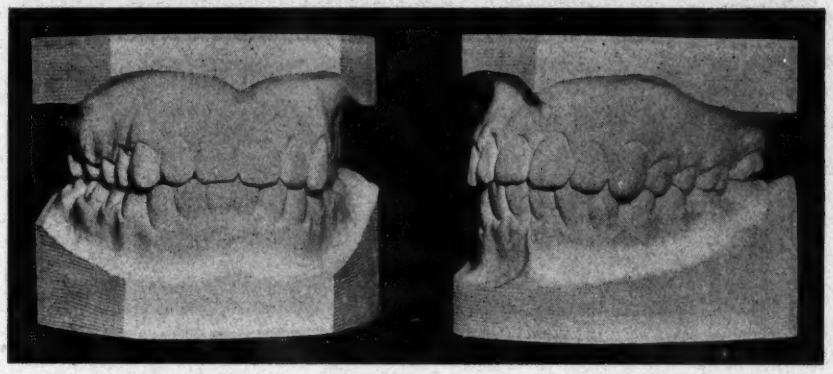


Fig. 13.

Fig. 14.

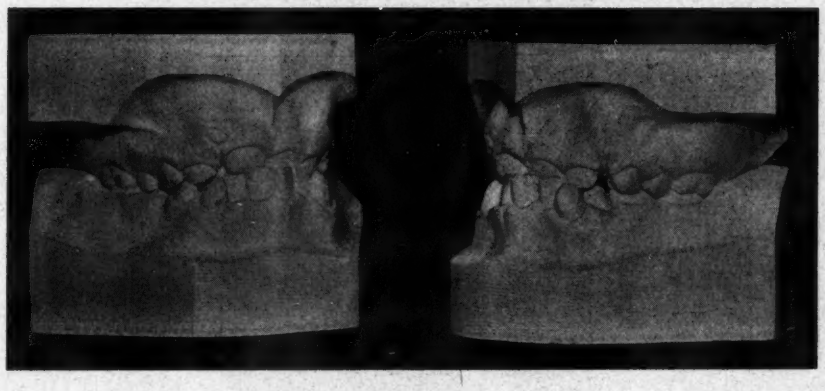


Fig. 15.

of the work of the hand and eye. How can they ever forget! They did it themselves with their own senses. The psychologists tell us the senses are the natural paths from the outside world to the brain. The student gets more from the clinic than he does from the classroom. I once heard the great teacher of operative dentistry, Dr. Darby of the University of Pennsylvania say, that he did his best teaching when he was an instructor, when he helped

the boys in the clinic. He was right—what the students do themselves they remember. In Fig. 14 is seen the palatal aspect of the case before and after treatment. The method of procedure is also indicated. Note the classical expansion arch appliance. All the cases shown in this symposium were treated

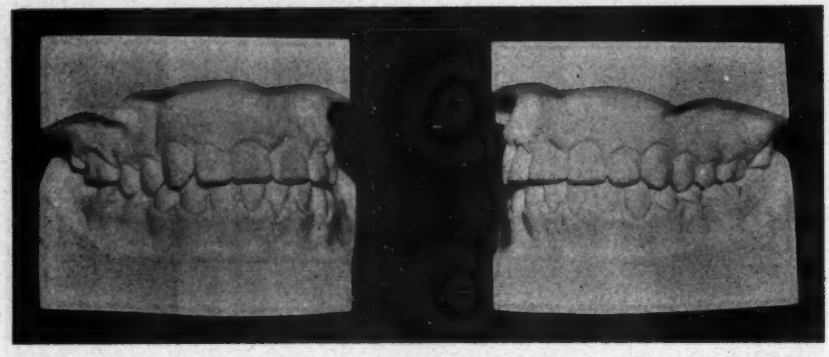


Fig. 16.

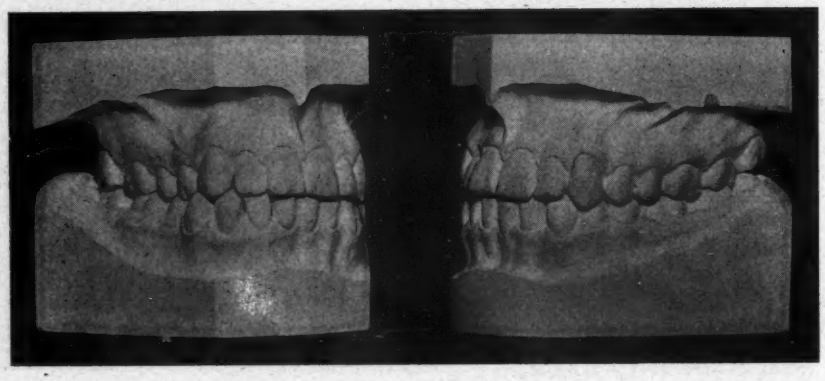


Fig. 17.

Fig. 18.

with these same basic principles which have done so much to put orthodontia in the high position it occupies in our profession at this time.

CASE 7.—Figs. 15, 16 and 17 may be familiar to some of you, for they were published with a partial report of this case in the INTERNATIONAL

JOURNAL OF ORTHODONTIA, March, 1923. At this time, however, it seems fitting to give a complete report of this interesting case.

The boy entered the school clinic in 1908 at twelve years of age (Fig. 15). Fig. 16 shows the condition after two school years of treatment, while Fig. 17 shows the condition fourteen years later.

The career of this patient is noteworthy. He was in moderate circumstances, in fact while attending high school he spent his spare time in an engineer's office, as office boy. He decided to become an engineer, so worked his way through the Massachusetts Institute of Technology, where he obtained his Master's degree. He then went to South America as an engineer, and helped in the construction of a railroad in the Andes Mountains. When our country entered the War, engineers were needed, so he entered the Navy, and is now an officer with the rank of lieutenant. Fig. 18 shows him at his desk.

How large a part the correction of this deformity has played in the success that this young man has won, is hard to estimate, but it is certain that the deformity would have forever barred him from becoming an officer in the United States Navy.

NOTATION OF ORTHODONTIC TREATMENT USING THE ENGSTROM RECORD CARD*

BY CARL O. ENGSTROM, D.D.S., SACRAMENTO, CALIF.

THE particular features of this card are its efficiency as a means of keeping a clear, concise record of orthodontic treatment and the ease of notation and of reading same. It is so arranged that any amount of record may be made either in detail or of principal facts. This, however, is a matter of choice to be decided by the individual operator. To record a treatment takes but a few seconds. The ease of notation and of reading the notes may be readily understood by the accompanying card. One or any number of treatments are so visualized that they may be seen at a glance.

In general, notations are made according to the occlusal aspect of the dentures, upper denture to the left of the card and lower to the right. However, facial or lingual views may be inferred by certain notation. A horizontal line is provided for each treatment, though there may be times when two lines are required. Shaded lines divide the card into four parts of five horizontal lines each, thus facilitating the counting of appointments. The date of an appointment is placed to the left, notations of treatment are made on the same horizontal line and the time involved to the right.

In beginning the treatment of a case it is well to note on the first line the teeth present, using the figure 1 for first dentition or deciduous teeth, and the figure 2 for the secondary or permanent teeth. It is well to note all

*Clinic given at the Twenty-second Annual Meeting of the American Society of Orthodontists, April 9-11, 1923, Chicago, Illinois.

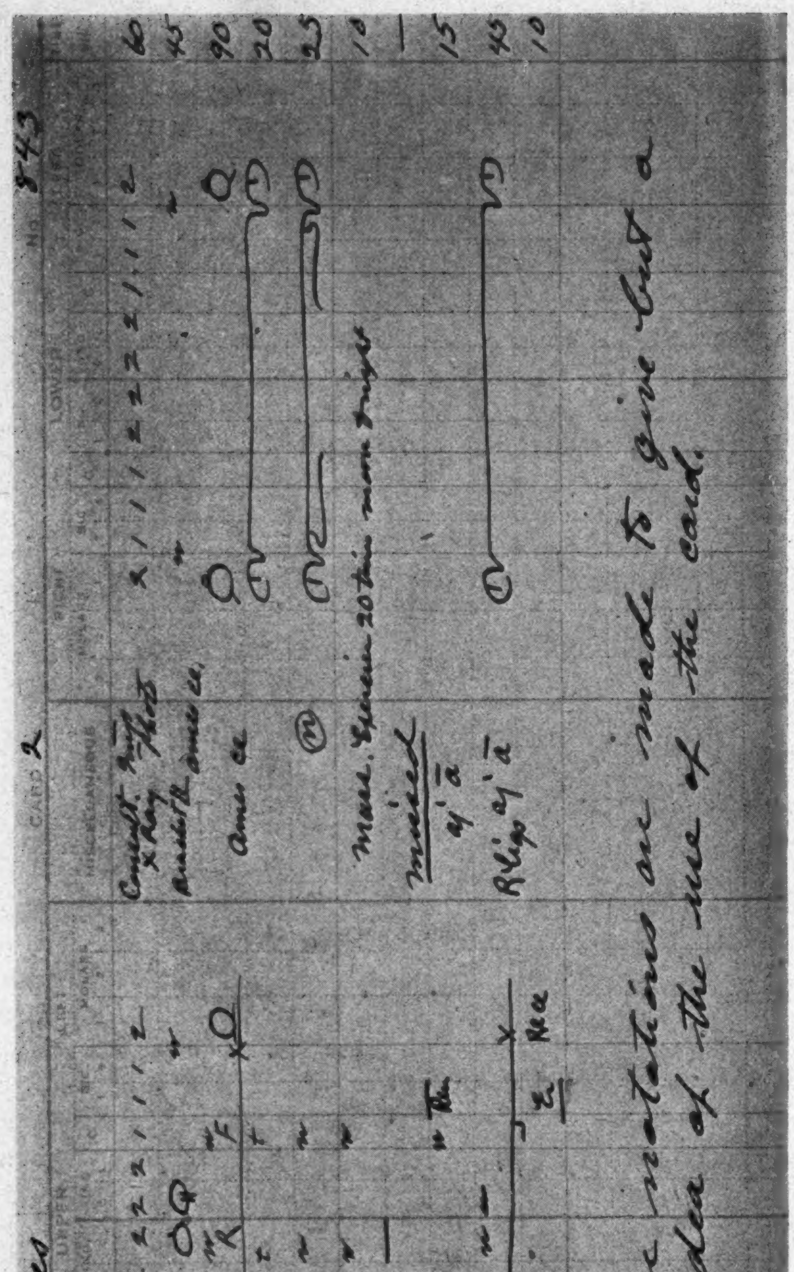

May Jones
CARD 2
NO. 843
The above notations are made to give but a general idea of the use of the card.

Fig. 1.

unerupted teeth by placing 1 or 2 in a circle. Then as the teeth erupt record may be made. At a glance all teeth are made known without resorting to the models or radiograms.

It may readily be seen that each tooth is represented by a vertical space distinct from all the rest, and additional cards may be placed one below the other with perfect continuity of these spaces. The vertical and horizontal lines form four-sided spaces each with mesial, distal, lingual and facial boundaries. The word facial is preferred being less confusing than the two words labial and buccal. These spaces are for the record of: removal of tooth or band, Rem; eruption of tooth, *Er;* band,  ; band with attachment, as with horizontal tube,  ; vertical tube,  ; spur,  ; and with bracket,  . The word bracket may be written under "miscellaneous," or the letter B placed in the center of band.

Arch wires are designated by horizontal lines corresponding in length to the number of teeth involved, a lingual line with curves, representing loops in the wire, may be placed near the line above (lingual boundary). Its presentation of a facial aspect is inferred. A nut on a D band (Angle) or on an arch wire may be noted by the letter x. Wire ligatures are noted by the letter w and cord by the letter c. The small letter t denotes tightened.

Movements of teeth may be noted by the use of capital letters, as M, mesial; D, distal; L, lingual; F, facial; and R, rotation on the long axis of the tooth. With the exception of R, these letters, but small, may be used in conjunction with the small letter r (root) and the small letter c (crown) for purposes which are self-evident.

Several words may be written on the horizontal line if required. In the center under "miscellaneous" may be put consult. for consultation, missed for missed appointment, name of material used, instructions given, notation of manipulation (adj.) of arch wires, imp. for upper and lower impressions, photos for photographs, x-rays for radiographs, etc. A line drawn horizontally may be used to emphasize a note or to define a change of treatment. If more notes are desired than may be conveniently placed on this side of the card, the letter n in a circle is used to denote record on reverse of card.

While by the above outline but a brief presentation is given, it is hoped it will suffice to introduce to those not already acquainted with this method a means of assistance in closer observation and more exacting treatment of cases. There is perhaps no better way to determine weaknesses in treatment than by a written record. The many years that these cards have been in daily use have proved their practicability. This, it seems, should be sufficient to warrant their universal use. To raise one's own efficiency is to better the profession.

DEPARTMENT OF
ORAL SURGERY AND SURGICAL ORTHODONTIA

SURGICAL CASE REPORTS

By Leo Winter, D.D.S., New York City

CYST OF THE RAMUS (FIG. 1)

THE patient, a young man twenty-seven years of age, presented himself with the following history:

Seven years ago he had some trouble with the right mandibular molar. His dentist informed him that the tooth should be removed as it had no room

Fig. 1.

to erupt, and was causing an infection. He was referred to a specialist, who advised him of a choice of two operations; the first a very difficult one, having just the third molar removed. The second a very much simpler one, that of

removing the second and third molars. The patient chose the latter. He states he was under a general anesthetic for about twenty minutes. About a year later he became conscious of a peculiar feeling of fulness in his mouth and a foul breath, as this condition caused him very little discomfort he paid no further attention to it. Thinking that perhaps this condition was caused by the absence of teeth and biting on the mucous membrane, he applied to the dentist for the insertion of teeth in this region.

Fig. 2.

Physical examination showed a swelling devoid of any inflammatory symptoms, beginning in the region of the third molar and extending upwards. Slight pressure caused the exudation of a greenish-yellow fluid.

Under novocaine anesthesia the entire cyst was removed. Patient has made an uneventful recovery.

CASE 2.—THIRD MOLAR FORCED INTO ANTRUM DURING EXTRACTION

The patient, a young man twenty-one years of age, states that a year ago he began having severe pains in the left side of his face and head. A careful

physical and radiographic examination by his physician failed to disclose any evidence of antral trouble. The radiogram, however, did show the presence of an unerupted third molar, which he was advised to have removed.

The patient claims the tooth was removed under a general anesthetic. Three months after the operation he became conscious of a foul and purulent

Fig. 3.

discharge from his left nostril, and it was for this condition that he sought relief.

Suspecting maxillary sinusitis an anteroposterior plate was made, which showed the presence of a tooth.

(Fig. 4.) Under novocaine anesthesia a mucoperiosteal flap extending from the first premolar to the first molar above the apices was made and a portion of the anterior wall was removed. The tooth could easily be seen and lifted out with a pair of hemostatic forceps. The wound was sutured with the exception of a small portion posteriorly which was kept open, for the

purpose of irrigation. The antrum was irrigated daily with warm normal saline solution. After twelve days no further discharge was evident.

CASE 3

The patient, a young lady twenty-three years of age, in applying to the clinic for relief of a large swelling in the left cervical region gives the following history:

Fig. 4.

Six years ago she first noticed a swelling in the left cervical region. Concomitant with the swelling she had pain in her teeth on the same side. She went to a dentist who removed four carious teeth in the left mandible. The swelling did not subside and it was subsequently opened and drained. She had relief for about a year, then the swelling recurred. Again it was incised and drained. Since that time it has been opened seven times, and various forms of treatment instituted.

Fig. 5.

Fig. 6.

Physical Examination.—Large fluctuating swelling, left cervical region, with several live scars. Examination of the buccal cavity showed the absence of all teeth posterior to the left lower canine with the exception of the second molar. No evidence of any pathology.

Fig. 7.

Fig. 8.

Radiograms were taken for the purpose of eliminating the mouth, as a possible cause of this adenitis, with the results as shown in Fig. 3. Believing this to be a foreign body of some kind, an effort was made to ascertain some history, but without success.

Operation.—An incision through an old scar at the lowest point of fluctuation was made and a large quantity of pus evacuated. A curette was then

Fig. 9.

Fig. 10.

Fig. 11.

Fig. 12.

inserted for the purpose of locating and removing the foreign body, with the result that it brought forth a thick black gelatinous substance. Six curettefuls were removed and then a probe was inserted into the wound, and a check up radiogram taken with the result as shown in Fig. 4. A chemical analysis of the substance proved it to be bismuth paste.

CASES 4, 5 AND 6 SHOW A SIMPLE METHOD OF TREATING COMPOUND FRACTURES OF THE MANDIBLE, WITHOUT RESORTING TO THE CONSTRUCTION OF SPLINTS, OR THE USE OF INTERMAXILLARY WIRING

CASE 4.—Compound fracture of the mandible canine region right side. The patient came to the clinic three weeks after his injury. He claimed to have been to some hospital where immediate treatment was instituted. His jaws were partly immobilized by intermaxillary wires applied to his anterior teeth (Fig. 5). The wires on the left side were broken (Fig. 6).

Fig. 13.

There was a fibrous union present and the deformity as illustrated in Fig. 7.

Under novocaine anesthesia (double mandibular injection) the fibrous union was broken. Angle's brass ligature wires were passed through the interproximal surface of the teeth (Fig. 8). A German silver arch 16-gauge was contoured to his arch (Fig. 9) and held in position by the wires, with the result as shown in Fig. 10.

CASE 6.—Compound fracture of the mandible canine region right side. Patient came to the clinic three months following his injury, with a fairly good fibrous union in the region of the fracture and with the articulation as shown in Figs. 11 and 12. Under novocaine anesthesia the jaw was re-fractured and set as shown in Fig. 13.

DEPARTMENT OF
DENTAL AND ORAL RADIOGRAPHY

Edited By
Clarence O. Simpson, M.D., D.D.S., F.A.C.D.,
and Howard R. Raper, D.D.S., F.A.C.D.

THE RESPONSIBILITY OF THE RADIOGRAPHER REGARDING INTERPRETATIONS OF RADIOGRAMS*

By Frederick W. Proseus, D.D.S., Rochester, N. Y.

IN THE professions of healing, operating, or proceeding along certain lines is an assumption of responsibility; therefore, as accepted, this reasonably rests upon the operator whether for dental or surgical treatment. However, time and superior fitness either through intensive training or refinements of specialization may shift or divide this responsibility. Let us recognize the scientific conservation of the patients' welfare as the fundamental principle of our interest in their behalf; not only protecting them from undue suffering and loss but automatically protecting our profession and gaining that confidence of the public which goes with a positive and skilful service.

To those specializing in radiography let us give all the encouragement possible where such services are beneficial in bringing to public and professional interest, the importance of radiographic findings. However, we must realize the necessity of discriminating between the purely commercial "x-ray pictures" and their attempted interpretations or those taken under the direction of an interested operator for a positive and definite purpose. Let us consider the former as of limited value.

By increasing the number of radiographers, plus increased efficiency, a greater field of appreciation of correct interpretation will be realized. One of the first duties of the dental profession regarding good dentistry is to aid in bringing about the use of the x-ray in every dental office. Let us forget the type of x-ray machine but bend our energies to inducing others to adopt the work. Every apparatus capable of taking a good radiogram should find a purchaser. If the dealers and manufacturers, regardless of price, would set to work the used x-ray machines in offices unequipped, better dental service would be rendered in most of them, thereby opening a field for the substitution of the old for new and up-to-date apparatus. With the increased use of the

*Read before the Third Annual Meeting of the American Society of Dental Radiographers, Cleveland, Ohio, September 28, 1923.

x-ray in offices generally there will be a decrease of the products of the purely commercial x-ray laboratory for dental information.

Many physicians refer their patients to x-ray laboratories where from ten to fourteen pictures are made at a nominal fee including interpretation. They instruct the patient to return with them and they then make a diagnosis and advise the patient, disregarding the dentist and his opinion. This is an unfortunate condition. Granting that much good has come from such methods it is to be hoped we have passed the peak of removing septic teeth from the patients receiving regular dental attention, and now can devote our energies

Fig. 1.—Case No. 1.

Fig. 2.—Case No. 1. Portion of nerve removed.

Fig. 3.—Case No. 2.

to more exacting technic and interpretation, thereby assuming that full responsibility which should be accorded the dental profession. Let us strive to make our work so superior that the time is not far distant when our medical and surgical confreres will say, "Well done, you have made good, take this patient and tell me when the teeth and oral conditions are right, and if I still am in doubt prove your findings."

From our x-ray findings let us not forget that it is our right and duty to so instruct our patients regarding the removal or retention of their teeth and dental restorations regardless of any other profession. But taking into account the patient's health as primarily of first importance; and if under due consideration his physician would request removal rather than treating in-

fected teeth or gums, then let us appreciate his position and proceed to place the oral cavity in a healthy condition as soon as possible. Or if infection is present and the patient has been advised against dental treatment, be sure to make it clear to the patient what the infection is and leave no doubt in his mind as to your opinion. Try to show him and offer to confer with them that have so advised.

Fig. 4.—Case No. 2.

Fig. 5.—Case No. 2. Shows an osteomyelitis.

The radiograms shown here are of interest along the lines of this subject.

CASE 1, Fig. 1, Mrs. W., age sixty years. This case represents patient having sound teeth extractions of the mandible. Was referred to me and diagnosed as true tic douloureux of mandibular nerve anterior to first molar. Under local anesthesia June, 1922, removal of the nerve was performed, securing the main trunk back to the first molar and all of the lip and terminal branches (Fig. 2).

With large round bur, canal opening enlarged to make uniform anterior to the first molar, into this a gold metallic plug was snugged into place by plugger and hand mallet, for the purpose of preventing possible regeneration of nerve. Result satisfactory. June 26, 1923, prosthetic restoration inserted.

CASE 2, Mrs. M., age fifty years. After extraction of third mandibular molar and subsequent dental radiograms taken and diagnosed as being clear from infection. Referred to me. Dental radiograms taken January 26 showing clear (Figs. 3 and 4). January 30, 5 x 8 plates were used which show an outline of infected area (Fig. 5), which was freely opened to subcutaneous tissue

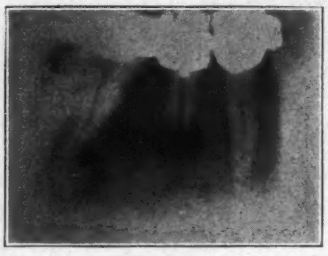


Fig. 6.—Case No. 3.

Fig. 7.—Case No. 4.

Fig. 8.—Case No. 4.

Fig. 9.—Case No. 4.

Fig. 10.—Case No. 4.

Fig. 11.—Case No. 5.

in area of the lower border of the jaw. After curettement and drainage with iodoform gauze case cleared in ten days.

CASE 3, Fig. 6, Mr. A., age fifty years. Patient had epilepsy since twenty. Several infected teeth. Advised removal July, 1922. One year later returned and was sorry that one tooth had been removed. Had been advised by two physicians not to have teeth out unless they bothered him.

CASE 4, Miss, age fourteen. Pain in side of face for two months. Radiogram taken and diagnosed impacted third molar—extraction advised. Referred to me. X-ray showed unerupted molar (Fig. 7). Upon inquiry, age was below third molar period although the physical development would pass for older.

Noticed absence of normal number of molars and was told that four had been extracted some years previous. Third molar area x-rayed at different angles and diagnosed normal third molar crown in position with roots unformed (Fig. 8). Maxillary teeth examination revealed small opening at the approximal cervical margin of maxillary first molar which led deep into body of the dentine (Fig. 9). Cavity freely opened and pulp found nearly exposed. Electrolytic medication, Churchill's tincture of iodine was applied for thirty minutes to cavity at area of near exposure, ½ of 1 milliampere or less current being used or just enough to be positive the current was active. Trial filling placed in tooth and no pain since (Fig. 10). Pulp has responded normally to electric pulp tests at time of first filling and completed trial filling.

Case 5, M. R., age seven years. Toothache mandibular right first molar. Overlooked fine fissure cavity extending almost to the anterior horn of the pulp (Fig. 11). X-ray revealed the true condition. First molar of opposite side had similar cavity.

THE TECHNIC OF ORAL RADIOGRAPHY

By Dr. Clarence O. Simpson, St. Louis, Mo.

STEREOSCOPIC EXAMINATION

(*Continued from page* 241.)

Position of Head. Same as for plane examinations of the region. Immobility promoted by clamps or a tight bandage around head and head rest.

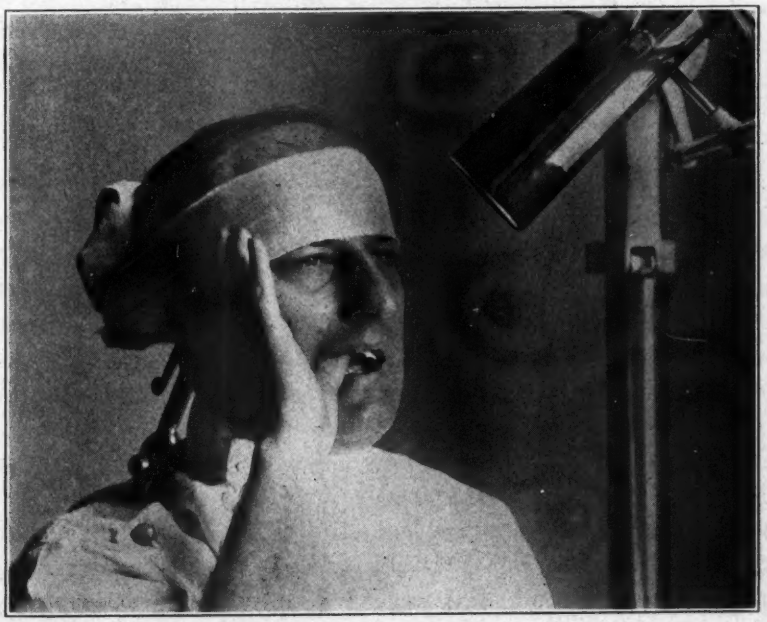


Fig. 1.—Application of bandage to promote immobility in stereoscopic intraoral examinations.

Vertico-horizontal Angle of Projection. Same as for plane examinations of the region.

Mesio-distal Angles of Projection. The angles resulting from shifting the target $1\frac{9}{32}$ inches to the left and right from the usual mesio-distal angle of projection.

Placement and Retention of Film Packets or Cassettes. Same as for other examinations of the region.

Cone. Centered as for plane examinations of the region, after the tube is shifted for each exposure.

Spark Gap. Same as for other examinations of the region.

Exposure. Same as for other examinations of the region with care to give approximately the same exposure to each view.

Fig. 2.—A stereoscopic view of a malposed tooth made under favorable inanimate conditions.

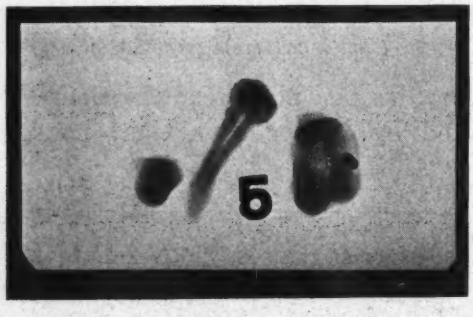


Fig. 3.—An occlusal view of the teeth in Fig. 2, illustrating the more definite localization.

Explanatory Description. Stereoscopic extraoral examinations often supply diagnostic information regarding extensive pathologic processes, foreign bodies, and traumatic injuries by differentiating superimposed structures and outlining cavities. Stereoscopic intraoral examinations are an interesting diversion, but have a negligible utility in radiodontic practice because of the greater accuracy of occlusal views in localization; while the boasted claims of determining the lingual or facial displacement of an unerupted tooth can be accomplished by the simple variance of plane lingual views.

Stereoscopic intraoral examinations were first made by Dr. C. Edmund Kells in 1902, and no one has materially improved the technic developed by him, although uninformed novices sometimes feature it as a new method. References to the subject in textbooks and monographs usually exaggerate the difficulty of the method, and suggest wonderful possibilities when it is mastered or a simple technic is devised; while in fact a stereoscopic exami-

nation is the same as any other two exposures of a region, except that the tube target is shifted 65 mm. and the patient must not move between exposures. In contrast to the confusing instructions for viewing, just hold the films in the same plane before a hand stereoscope, move them until the images fuse, and a stereoscopic view is obtained of the lingual or facial aspect depending upon the right or left relation of the films. These statements are not intended to imply that accurate stereoscopic examinations can be made without the careful and precise technic which is requisite for all oral examinations, but to dispel the impression of mystery and extreme difficulty commonly associated with the method.

Stereoscopic radiography is based upon the principle of binocular vision or the fusion of the images seen with each eye, by which size, form, and dis-

Fig. 4.—A stereoscopic view of a radicular cyst which discloses the outlines of the cavity, but gives no clew to the extensive buccal involvement shown in Fig. 5.

Fig. 5.—An occlusal view of the cyst shown in Fig. 4 which accurately shows the extent of involvement toward the buccal.

tance are judged. The average distance of pupillary separation is 65 mm., the extremes ranging from 60 to 70 mm. Hence, in accurate stereoscopic radiography the tube target is shifted 65 mm. or $2\frac{9}{16}$ inches between the exposures. Some tube stands are so designed that an excessive target shift results from centering a small cone after the lateral movements of the carriage; and this should be corrected by a compensating reduction in the lateral movement.

The cooperation of the patient and the operative expediency is more exacting than the specific requirements of the technic. The patient should be emphatically told that two exposures are to be made and immobility is required until the second exposure is completed. The tube stand and chair should be locked in position, and the patient's head securely retained. In

calculating the mesio-distal angles of projection the tube carriage should be placed midway between the lateral shifts with the cone directed to give the desired view as established by preliminary exposures, and then trial shifts made with recentering of the cone to observe the effect of the changes. The precaution often prevents unexpected complications in the location of the tube stand or the pose of the patient after the first exposure.

For intraoral examinations the two film packets should be readily accessible, and provision made for the quick disposal of the first to reduce the time between the exposures. For convenience the packets should be marked before or after exposure and when removed to the dark room perforated

Fig. 6.—A stereoscopic view of unerupted teeth and supernumeraries.

Fig. 7.—An occlusal view of the teeth shown in Fig. 6, with definite localization.

with a pin to distinguish the left and right veins, and stereoscopic films from others of the examination.

The film packets may be retained in the mouth by holders, digital retention, or when placed in the occlusal plane by occlusal pressure of the teeth. Most stereoscopic examinations of the maxillary regions have been made with the packets in the occlusal plane, but excepting the localization of unerupted teeth a better diagnostic view is obtained with the packets in contact with the soft tissues. Elaborate means have been described and employed to place the packets in exactly the same location but, as Dr. Kells long ago observed, it is only necessary to place them in the same plane. For uniformity

the packets should be placed in approximately the same location, but this has no bearing on the result so long as the area under examination is included.

The films may be viewed by holding them on a piece of glass in a hand stereoscope, or they may be mounted on glass with adhesive paper strips. Although the films may be viewed from either side or either lateral relation, the perspective is more vivid when viewed from the nonemulsion side with the left exposure mounted to the viewer's left because of the exaggerated aerial perspective in radiographic records from underfiring or scattered radiation. The left exposure is that made with the tube shifted toward the operator's left when facing the patient. To easily fuse the images in the stereoscope, one film should be placed in the approximate location and the other moved to conform while viewing them. Where there are no metallic restorations in the region, a lead or wire marker aids in fusing the images. Theoretically the films should be viewed at the target-film distance, but considerable latitude is permissible through ocular accommodation and preconception of the structures.

For stereoscopic extraoral examinations a changing tunnel is required to change the films without disturbing the pose of the patient. Dr. Frank Van Woert designed a film-shifting tunnel which makes it possible to produce both views on a 5 x 7 film and view them in a hand stereoscope. A wheatstone or reflecting stereoscope is generally used in viewing extraoral examinations, but the films may be trimmed to a size which can be mounted for a hand stereoscope. There is no need to mark the left and right or the front or back of double coated films, for when the images fuse the tube or film aspect is obvious.

(To be continued.)

ABSTRACT OF CURRENT LITERATURE

Covering Such Subjects as

ORTHODONTIA — ORAL SURGERY — SURGICAL ORTHODONTIA — DENTAL RADIOGRAPHY

It is the purpose of this JOURNAL to review so far as possible the most important literature as it appears in English and Foreign periodicals and to present it in abstract form. Authors are requested to send abstracts or reprints of their papers to the publishers.

Oral Sepsis in Children. H. S. Dunning (New York). The Dental Digest, February, 1924, xxx, 2.

The mouth harbors over a hundred kinds of bacteria and is always being traumatized in various ways and degrees. Infection is common and may extend to the deep bony structures both beneath the gum and through the root canals. Hence the more teeth a man has the greater the number of possible ports of infection. Contrary to the general opinion the child is more menaced than the adult for it has no conception of mouth hygiene and seldom is seen by the dentist. It is estimated that 80 per cent of children suffer from oral sepsis. This affects the general health in various ways such as weight loss; after properly treating oral sepsis the lost weight is quickly regained. Proper mastication may also be impossible. There is more or less interference with sleep. In these cases of ill health the physician seldom examines the mouth but prescribes for primary digestive disturbances. Babies nursing mothers with septic mouths may fail to gain weight normally. The treatment of these cases must of course be surgical but there is poor cooperation at present between doctor and dentist. In some cases the dentist blames the doctor for his failure to face the situation, while in other cases the doctor is the aggressive and the dentist the timid one. There is some fear of anesthesia in young children and the tendency to pass the buck back and forth and dodge responsibility is common in both camps. There should be great dental infirmaries equipped in every way to handle the cases and accept all responsibilities.

Disappearance of Disease After Removal of Dental Focal Lesions. T. A. Leach (Hutchinson, Kas.). Dental Items of Interest, May, 1924, xlvi, 5.

The author enumerates a number of cases in which various diseases vanished after proper treatment of apical foci. The first two are examples of psoriasis, an affection hardly accused of being due to focal infection. The interval since disappearance of all skin lesions is long enough to suggest a true cure. The third case suggested petit mal epilepsy although the patient was an old man previously free from any suggestion of neurosis. Later true major convulsions occurred. After treatment of his teeth the symptoms gradually wore away. Cases IV and V were examples of headache or neuralgia,

periodical and accompanied by some mental confusion in one case. The sixth patient had arthritis deformans accompanied by some cerebral symptoms—attacks of irresistible sleep and neuralgia. The nervous symptoms disappeared and the arthritis improved. Case VII was one of simple goitre. Patient number eight suffered from an unmotivated conjunctivitis and it disappeared after conservative treatment. In the next case a high degree of albuminuria was the chief symptom along with general failure of health. In Case X the trouble was recurrent influenzal syndrome, in Case XI high blood pressure in a corpulent woman, Cases XII and XIII had respectively arthritis and lumbago, Case XIV suffered from roaring in the ears and headaches. The last patient of the series had numerous symptoms, several of which came under the head of neuralgias along with functional disturbances. The author in all cases used the usual laboratory resources, radiography before and after of course being the chief, also cultures. Treatment according to exact indication was conservative or radical including apicectomy or extraction according to the case.

Oral Sepsis in Its Relation to Systemic Disease. R. W. Bunting (Ann Arbor). The Dental Cosmos, May, 1924, lxvi, 5.

Dentistry began as a science but became a mechanical and artistic profession which is now endeavoring to return to a science. The perfection in mechanics and artistry seriously threatened the general integrity of the organism. Otherwise stated, the doctrine of focal infection has had revolutionary consequences. The outcome must of course be a compromise. Certain teeth which may be saved from the mechanistic standpoint should not be saved. The dentist who boasts that he has saved a certain type of diseased teeth realizes that he may have done this at the expense of the patient's general well being. In a way the attempt to save certain teeth has always been recognized as a gamble, but loss of the bet has not until recently been regarded as tantamount to injury of the general health. The vital question has been and still is concerned with drawing a sharp line between teeth whose salvage is not inimical to the general health and those which can be saved with impunity. Attempts to lay down general maxims for guidance have thus far proved fallible. The discoveries and practice at the Mayo clinic seem clean cut, but involve wholesale sacrifice of the teeth. It is conceded, however, that the material in this clinic is not average but the result of a certain natural selection. The patients at this clinic are mostly confirmed invalids and must not be compared with the clientele of the average dentist. Again the dentists in formulating laws must not be overawed by physicians, for the average medical writer on focal infection is not a practical dentist. A questionnaire sent out to 40 dental practitioners versed in focal infection showed a consensus of opinion that a mere devitalized tooth which gives no trouble to a sound patient should never be extracted simply because of absence of pulp. Again pathologists today are showing that lesions attributed during life to focal infection have been found on autopsy to have been the result of very different conditions—gonorrhea, syphilis, gout, tuberculosis, nephritis, arteriosclerosis, trichinosis, etc., etc.

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EDITORIALS

Raiding the Treasury

DURING the last few years it has been a common custom for individuals or organizations to propose bills of various amounts of money for different purposes, said bill to be paid from a society treasury. Any one who questions the value of the appropriation of these large amounts or even asks why this particular thing should be done, or suggests that the treasury should not be raided, immediately loses favor with a certain group of men.

During the last few years, and up to the present time, it has been our observation that dental societies seem to be the common prey of individuals who propose plans which will eventually spend most of the money which has accumulated in the treasury. Of course, there is no reason why dental societies should have enormous amounts of money lying idle, but likewise, we see no reason, where as a result of careful management on the part of the secretary-treasurers, societies that have accumulated a little money from the regular

source of income, someone should be allowed to further some pet scheme which will eventually leave the treasury of the society almost ruined.

We find in the dental societies during the last few years that one of the most favored plans of raiding the treasury has been the voting of a sum of money for "dental research." The term "dental research," appears to have a sort of holy halo thrown around it in the minds of some men. Many things are proposed under the guise of "dental research" and are allowed to go through without being questioned; any one who questions it, is looked upon with great disfavor by certain groups worshiping before the "Shrine of Dental Research." We agree that dental research is a high sounding term, but in spite of that, we insist that dental research shall produce something in return for all that has been spent.

During the past few years the American Dental Association and certain state and local dental societies, have voted great amounts of the money for dental research. Not long ago we took it upon ourselves to find out exactly how the science of dentistry had been benefited or the public had profited from the sums of money that have been spent for dental research during the last few years. As a result of our investigations in going through dental literature and comparing the science as we know it today with what it was before these sums of money were spent; we are forced to admit that dental research has been the "favorite god" that had raided the treasury and which has failed to make any fair return for what was given.

Recently we were present in a society when the president proposed a certain sum of money for dental research. The committee appointed to review the president's address brought in a report that such a sum of money should be voted by the society for dental research. Upon being asked by a member of the society what they expected to do with that money, no one was able to say. They were simply ready to worship at the "Shrine of Dental Research" without having any definite plan in mind as to when, why, or how that money should be expended. The money asked for was voted by the society and it is assumed that it will be paid out for dental research, but still no one knows what is going to be accomplished.

Dental research from a productive standpoint is more or less of a failure. This is proved by the fact that several years ago a member of a society made an endowment, the income of which was to be given as a prize for dental research. This bequest was made several years ago and up to the present time not one cent of the accumulated earnings have been paid for dental research, because no dental research has been known which is entitled to receive the prize. The society appointed a committee to try to form some plans whereby the earning could be spent. The committee was very much at a loss to know what sort of plan they could formulate. We mention these things because dental research is something which cannot be bought and paid for like one buys a suit of clothes. Dental research workers are born and not hired. Such scientific investigations and work as have been done which benefited the dental profession in the past have been the result of some individual who has been fitted for dental research, working on the problems independent of any endowment or sum of money voted to him. As it has been in the past, so we

are inclined to believe; the most beneficial research in the future will come from individuals whose activities are unhampered by any organized body. However, in spite of the fact that "dental research" has become one of the greatest pirates in raiding the treasuries of organizations, we are glad to note that certain men of the dental profession are beginning to demand a return for the money spent under the guise of dental research. Recently a committee in a large dental society asked for four thousand dollars ($4,000) for dental research, the executive committee refused to give that amount because the plans the research committee outlined were entirely impractical. Likewise, another individual who has been a great worshiper of "dental research" asked a society to contribute a sum of money for a fellowship which was proposed to aid "dental research." This sum of money was not voted because, the committee in charge of the funds had no authority to spend money for the purpose outlined.

We find another favorite way of raiding the treasury is by officers of the society asking men to give papers stating that the society will pay the essayist's expenses and then allow the essayist to write his own expense account. In some cases another plan is followed where the society states that they will pay the essayist a reasonable sum for his time and then they allow the essayist to name the sum of money he wishes. We know of one instance where a raid was made upon a treasury by an essayist turning in a bill for $300 a day including the days he spent with the society and the days he spent in traveling. It seems the individual must have lost all sense of professional duty and he certainly placed a financial value on his services entirely beyond his ability. We believe a man who gives a paper before dental societies should be paid a reasonable amount, but we do not believe that the amount should be all out of proportion to what he would have earned in his own practice for the time spent. We even believe that it is not necessary for dental societies to pay a man as much as he would have earned in his own practice, because a man who is successful professionally owes something to his profession and to the public which can be paid, to a certain degree, by instructing his fellow practitioner along lines technical or scientific which will enable them to perform a better service to their patients.

We know of certain essayists who have taken advantage of the hospitality of dental societies and in one instance, the society agreed to pay the essayist $25 a day and his expenses. At the most the work should not have taken the man away from his office over five days, leaving two days for travel each way and one day working for the society. We find the society was taken advantage of and the treasury raided by the essayist's making a vacation of the trip, staying at a hotel for eight days and charging the entire amount to the society,—charging the society twenty-five ($25) dollars a day for the time while staying at the hotel enjoying himself! We believe such a practice as this should not be allowed by dental society officials. The time has arrived for societies to show that the treasury cannot be raided at the whims or wishes of some favorite essayist.

Probably one of the greatest raids on the treasury that we have heard of is the case of an essayist who was brought to a certain city to give a paper

with the stipulation that expenses would be paid. During the time he was away from home he visited two adjoining cities for his own pleasure and he charged the two trips to the society. In other words, the expense account was so written as to include two trips to adjoining cities with which the society had nothing to do.

It is probably because it is a common practice for some men to do these things that it was thought proper by some individuals to raid the treasury of the dental profession by increasing the dues in the American Dental Association from $2.00 to $4.00. It is probably because the tendency to raid the treasury has become common that the supposed Amendment to the By-laws was supposedly passed providing certain amounts of the proposed increase in dues to be spent by certain individuals without the necessity of consulting the Board of Trustees or any governing body as to why or for what this money should be spent. It was probably because of the great American "Indoor Sport" of raiding the treasury that this supposed amendment at Cleveland was supposedly passed at a time when it could not legally be considered.

In face of the modern tendency to economize, we believe that dental society affairs should be run on the same businesslike method; and no amendment should be written making it possible for any individual or group of individuals to raid the treasury. Funds of the dental societies should be handled with the same common sense plans as they are handled in the best organizations in the country.

Oral Surgery*

The book is divided into two parts, part one, treating of Principles of Surgery and part two, Oral Surgery.

Under principles of Surgery, the author describes the following subjects: Bacteria and Inflammation, Non-specific Infections, Specific Infections, General Tuberculosis, the Venereal Diseases, Wounds and Hemorrhages, Bandaging, Shock and Medical Emergencies, Asepsis and Antisepsis, General Diagnosis, and Diseases and Injuries of the Vascular Systems.

From the above list, it can readily be seen that the author's attitude is that of the medical doctor rather than the dentist. In chapter three, under Specific Infections, the subject of erysipelas and acute infection of the skin and subdermal structures is described minutely and three and one-half pages devoted to it. Its relation to the mouth and its direct association with the mouth is very briefly described in but five lines. In this same chapter the author discusses minutely such diseases as actinomycosis, even though he can only cite one case. Tetanus, hydrophobia and anthrax are also treated.

In the discussion of syphilis, six illustrations are presented of lesions on a finger, secondary lesions on the chest, ulceration of face and nose and syph-

*A textbook on General Surgery and Medicine as applied to Dentistry by Stewart Leroy McCurdy, Professor of Anatomy and Oral Surgery (Dental) and Associate Professor of Surgery (Medical), University of Pittsburgh, published by Pittsburgh Dental Publishing Company, 8103 Jenkins Arcade, Pittsburgh, Pa., This book contains 536 pages of text and 228 illustrations. Price, $5.00.

ilitic periostitis, but the author fails to present even a single illustration of mucous patches or other syphilitic lesions in or about the mouth.

In chapter six, under Foreign Bodies, a subdivision of Wounds and Hemorrhages, a detailed description of the occurrence and management of Foreign Bodies is given in the nose, ear, throat, larynx and stomach. It is hardly conceivable that foreign bodies, for example in the ear or stomach, are even indirectly related to the subject of Oral Surgery, and it appears to us to be entirely extraneous to the subject matter in hand.

The chapter on General Diagnosis is well handled and rather exhaustively treated. An entire chapter is devoted to the Diseases and Injuries of the Vascular Systems, and heart sounds, diseases of valves, muscles and pericardium are minutely enumerated. Here again, we fail to see the pedagogic value, for example, of mentioning the treatment of chronic phlebitis to be feric chloride in twenty-drop doses after eating. To a dentist entirely ignorant of the treatment of such lesions, the text is rather inadequate as a reliable guide and to the physician it is almost too brief to be an authentic reference. We cite this instance to show the point of view of the writer to be more that of the physician than the dentist.

In Chapter 13, under the heading of Alveolar Abscess, and its more grave consequences, the following statements are made: "The non-infective conditions are such factors as arsenic left in the periapical tissues after treatment, the filling of a root canal with an irritating substance, or the protrusion of a canal filling through the periapical foramen. A frequent error in this direction is made following the adjustment of a crown where the drilled hole instead of following the root canal of the tooth passes out through the side and into the bone tissue, the operator assuming that he is entirely within the tooth structure. Arsenic left in the tissue in such condition cannot be removed and must necessarily result in a very low grade of osseous disintegration which will eventually destroy considerable tissue."

It is quite evident from the foregoing that the a..hor is not very familiar with common dental operative technic. Arsenic, even if it is used at all, is placed in the pulp chamber in order to destroy the vitality of the pulp. It would therefore be futile to place arsenic into a canal after it has been drilled presupposing thereby a non-vital pulp, and such procedure, of course, is never followed by dentists.

We question very seriously the author's ability in drawing the line between major and minor surgical operations in the mouth when he makes the following statement, "Assuming that the dentist has made an effort to close an alveolar fistula by cutting off the root of the tooth and by draining through the tooth and that neither of these methods has resulted in a closure, and that the process of disintegration of the bone has extended through a period of several months, the case is one for major surgical operation. The operative treatment includes the removal of the offending tooth and of that part of the alveolar process external to the tooth on the side of the fistula." When the author speaks of cutting off the root of a tooth, he probably means the end of the root only.

In Chapter 14, under Mouth Lesions, Stomatitis is discussed and the writer says, "That Oral Pathologists and Pediatrists have not agreed upon a uniform and systematic classification." As pediatrists deal mainly with diseases of children and the subject of stomatitis, which is an inflammation of mucous membrane, is more nearly related to the field of skin diseases, it would appear to us to be more appropriate to quote authorities on dermatology, rather than pediatrics, as the author does when he defines the word Aphtha, quoting from Holt and Smith (pediatrists).

The author treats very exhaustively the subjects of Alveolar Abscess, Mouth Lesions, Diseases of the Tongue, Surgical Diseases and Injuries of the Face, General Bone Diseases, Diseases of the Mandible, Maxilla, Tuberculosis of the Face, Mouth and Jaw, Syphilis of the Mouth, Tumors in general, Developmental Tumors of the Teeth, Cancer, Cleft Palate, Neuralgia, and Fractures. The chapter on Cleft Palate is very excellently done The history, etiology, as well as varieties, are clearly presented and the subject of operative management carefully explained.

It is strange that a book apparently so exhaustive should have failed to include the subjects of Alveoectomy and Root Amputation. The illustrations in this book are so poorly executed as to be practically worthless, but this may be explained by the statement of the publishers in the front part of the book to the effect that this is a sort of emergency edition and that their third edition will soon appear.

Taken all in all, the author deserves considerable praise for the numerous practical cases cited, both from his own practice and the practice of others, and for the comprehensive manner in which he has enunciated all medical subjects however distantly related they may be to the subject of Oral Surgery. We are sure that this book will prove of considerable value to the general practitioner of dentistry, particularly in that it will reveal to him the subject treated from an entirely new angle. —*A. W.*

ORTHODONTIC NEWS AND NOTES

The American Society of Orthodontists

The Twenty-fourth Annual Meeting of the American Society of Orthodontists will be held in the new Atlanta-Biltmore Hotel, at Atlanta, Ga., April 14, 15, 16 and 17, 1925. (Mark off the date now.)

Walter H. Ellis, Sec'y-Treas.,
397 Delaware Avenue,
Buffalo, N. Y.

Clinton C. Howard, President,
Doctors Building,
Atlanta, Ga.

New York Society of Orthodontists

The fall meeting of the New York Society of Orthodontists will be held the afternoon and evening of Wednesday, October 8, 1924, at the Hotel Vanderbilt, Park Avenue, New York City.—William C. Fisher, Sec'y.

News and Notes

Dr. Charles R. Baker announces the removal of his office to 708 Church Street, Evanston, Ill., for the exclusive practice of orthodontia.

Dr. David Wield McLean announces the removal of his office to 918-20 Professional Building, 1052 West Sixth Street, Los Angeles, Calif.

Dr. R. W. Noland announces the removal of his office from the Fleming Building to 1113 Equitable Building, Des Moines, Iowa. Practice limited to orthodontia.

Dr. Jerry O'Brien announces the opening of his office in Room 322, Elks Building, Stockton, Calif. Practice limited to orthodontia.

Dr. A. B. Thompson announces the removal of his offices from 925 Fleming Building to Suite 713-715, New Equitable Building, Des Moines, Iowa. Practice limited to orthodontia.

Dr. Landis H. Wirt announces the removal of his office to 718 Sherland Building, South Bend, Indiana. Practice limited to orthodontia.